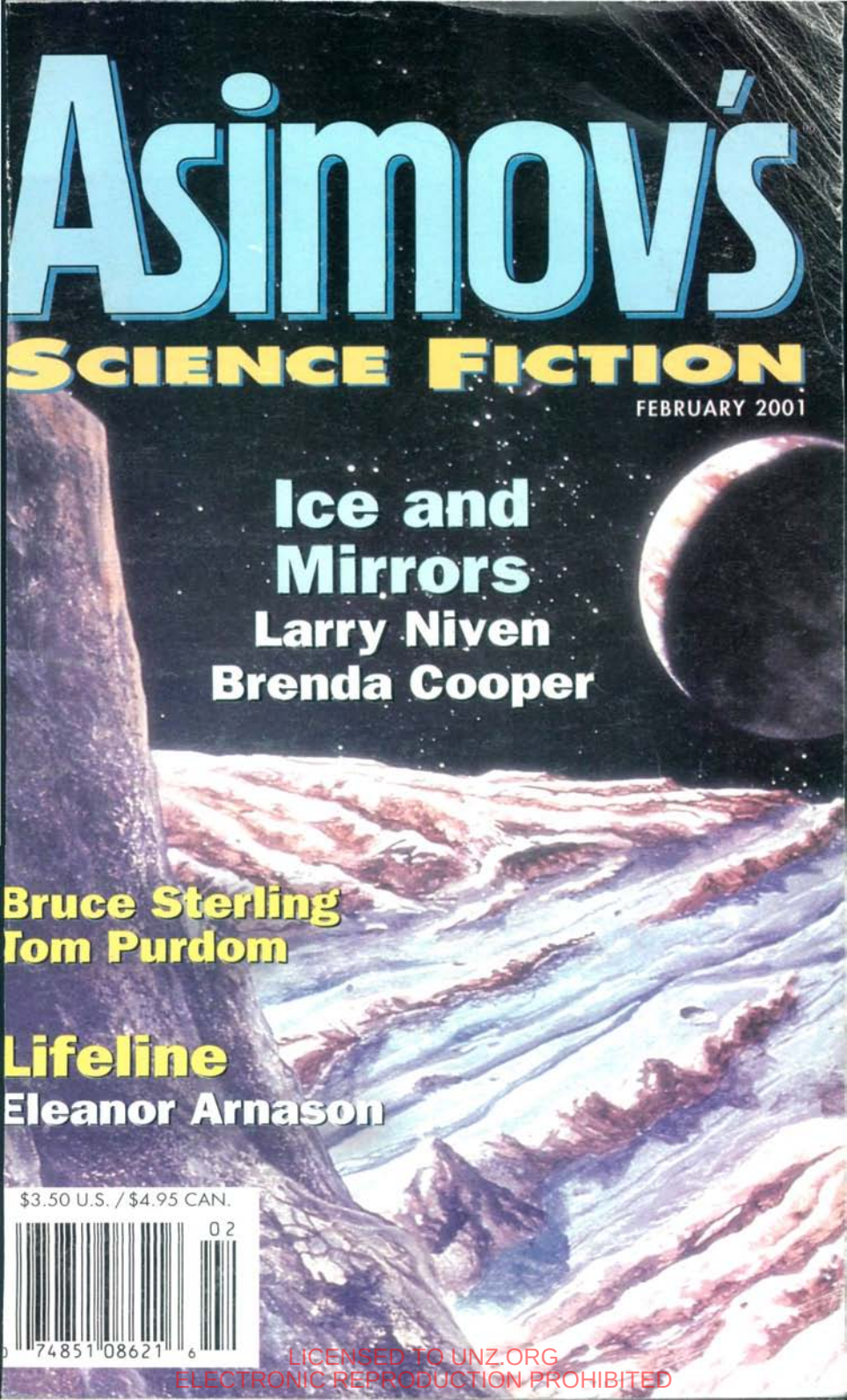

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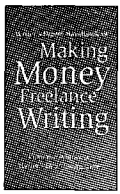

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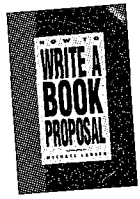

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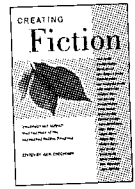

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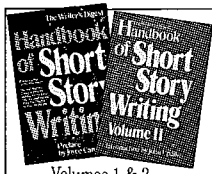

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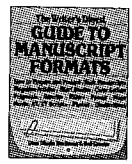

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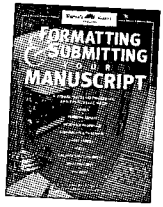

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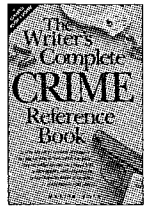

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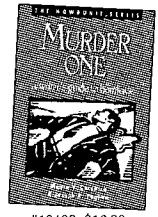

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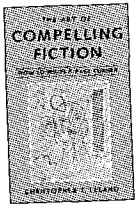

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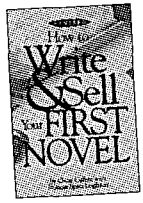

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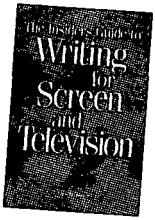

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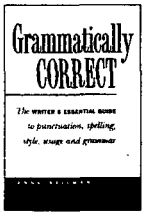

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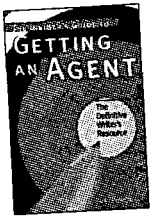

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REFLECTIONS

by Robert Silverberg

LIKE IF

So I was sitting in my hotel room in London waiting to go out for dinner and skimming through the overseas edition of the *Wall Street Journal* and this sentence jumped out of the page at me:

"'It was like if Steve Martin was filming a movie about restaurants,' she said."

You don't see anything strange about that sentence, because you've grown up in a world in which "like" has taken over the meaning of "as" in making comparisons. First we had the cigarette that "tastes good like a cigarette should," and then we got phrases like "Like in the United States, the British are great sports fans," which led to the even more ghastly "Unlike in the United States, the French prefer to eat their meat rare," etc. To my ear, these are all ugly sentences, and ungrammatical, besides. You will note that I did use *like* correctly myself a couple of sentences ago, when I spoke of "phrases like." Because I had an old-fashioned education, you will always hear me say "as if" instead of "like" when making a comparison involving a verb, and I use the funny old subjunctive, too: "It was as if Steve Martin were filming a movie about . . ."

But this is a grammatical battle long since lost. To tell people such things as "'like' is an adjective or sometimes an adverb, and occasionally a noun, but never a conjunction" is mere folly in an era when nobody knows what a conjunction is, or, for that matter, adjectives, adverbs, and nouns. And there's ample precedent for the modern usage, anyway. The Oxford English Dictionary gives the example of Charles Darwin's sentence, "Unfortunately few have observed like you have done," and even though the dictionary does go on to call the usage "vulgar and slovenly," there it is in Darwin. And what Darwin in a weak moment said a century and a half ago, almost everybody does nowadays. That monstrous phrase "Unlike in the United States" and similar expressions turn up in the newspapers every day, even unto the New York *Times*. And there, in the *Wall Street Journal*, was the jarring "like if," even though the reporter was simply quoting someone. When I hear such things, I grit my ears and try (not very successfully) not to notice.

And by getting all worked up over the sad state of grammar in the twenty-first century, I failed to notice the significant science fictional content of the newspaper piece I was staring at. For what the *Journal* was trying to tell me was that one aspect of one of my own early novels was in the process of turning into reality.

In 1966 I wrote a book called *Thorns*, a pretty good book that I really ought to arrange to bring back into print one of these days. Chapter Nineteen of *Thorns* takes place in a restaurant called the Galactic Room, and the restaurant scene of *Thorns* was quite famous in its day. Let's skip quickly past the fact that the Galactic Room's carpet is a not-quite-sentient creature from an

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alien world, or that the chandelier is "a colossal efflorescence of golden tear-drops, crafted from the amber-like secretion of a bulky sea-beast living along the gray shores of a Centaurine world," or that the diners get to their tables aboard anti-gravity plates that float them up to the restaurant's dome, and their food reaches them the same way. We'll move quickly on to cocktails:

She looked at his drink.

There was something swimming in it.

The glass was translucent quartz. It was three-fifths filled with a richly viscous green fluid. Moving idly back and forth was a tiny animal, teardrop-shaped, whose violet skin left a faint glow behind as it swam.

"Is that supposed to be there?"

Burris laughed. "I have a Deneb martini, so called. . . . Specialty of the house."

"And in it?"

"A tadpole, essentially. Amphibious life-form from one of the Aldebaran worlds."

"Which you drink?"

"Yes. Live."

"Live." Lona shuddered. "Why? Does it taste that good?"

"It has no taste at all, as a matter of fact. It's pure decoration. Sophistication come full circle, back to barbarism. One gulp, and down it goes."

Down it goes, yes. All the poor girl wants is a chopped protein steak and a glass of milk, but she has to sit through an endless procession of weird alien foods, washed down with two kinds of wine, turquoise and ruby, that turn opalescent, no less, when mixed. "Catalytic response," he tells her. "They calculate the esthetics of sight as well as of taste." It's a lively scene, perhaps the high point of the novel, and I

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had a lot of fun writing it back there in the primitive year of 1966.

But now it's 2001, and we are in a prosperous and just a teeny bit decadent era, and the *Wall Street Journal* wants to tell me about modern-day restaurants where, as the headline says, "Brave Diners Discover Food That Bites Back." Weird food is the innovation of the day. In Paris you can get deep-fried Mars bars, which must seem wondrously exotic to the jaded palates of the French. In our own nation's capital, one restaurant offers an appetizer of sea urchin sprinkled with Altoids mints. At Sushi Samba in New York, $29 will get you—my God—"lobster sashimi," a freshly killed critter that comes to the table still waving its pincers. They sell forty orders a week of it. I never had any trouble *writing* about such stuff, but seeing it at the next table would, I have to say, send me out the door.

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Wait. There's all too much more.

The dish that brought forth the "It was like if Steve Martin was filming a movie about restaurants" line is the seafood tartare course at Tru Restaurant in Chicago, which is a dish of chilled minced seafood served floating over a bowl containing a live Japanese fighting fish. "I was afraid it was going to jump out and bite my nose," one diner said. (You aren't supposed to eat the fighting fish, I gather. By the time you read this, Karen and I will have dined at Tru ourselves, in the company of Joe and Gay Haldeman. I intend to encourage Mr. Haldeman, who is a battle-hardened veteran of Vietnam, to sample the seafood tartare. We'll see what he does with the live fish beneath.)

The future is invading the kitchens of our most adventurous restaurants at an astonishing pace. (These are "edgy" restaurants, in the new sense of that word, and are sure to make this particular veteran gourmet "edgy" in the old sense.) For example, a three-star restaurant called El Bulli in Spain now serves chocolate smeared with mustard and squid ravioli containing coconut soup. (*¡Gracias, no para mí, señor!*) The same—edgy, yes—restaurant offers an ice cream cone full of trout eggs, which actually doesn't sound so awful. They also have a yeast soup with sorbet. Sushi Samba in New York, where the pincer-waving lobsters are so groovy, lets you ease your uneasiness by quaffing cold *sake* that has the aroma of rotten eggs. And one of the fave appetizers is a plate of silver-dollar-sized crabs that you eat (fried, and dusted with kosher salt) right down to the claws. "Oh my God, they were scary," one diner told the *Journal*. "They looked like insects." (Why the kosher salt? Don't ask me. I'm neither a chef nor a rabbi. I *can* tell you, though, that you can fill a restaurant three feet deep

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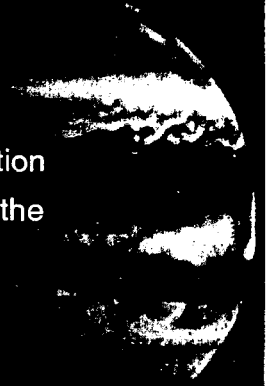

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with kosher salt and it still won't make crabs of any kind kosher.)

I don't want to seem too stodgy here. Who am I, who dreamed up the restaurant scene in *Thorns* and plenty of other futuristic oddities in the course of my long career, to be taking a tut-tut attitude toward culinary inventiveness of this sort? As one of the new chefs puts it, "This is creativity." Agreed. I have to admire creativity wherever I find it, even on the plate in front of me. How can I know that mixing Altoids and sea urchin is a dumb idea before I've tried it? Where do I come off sneering at duck breast garnished with shrimp and topped with a port wine sauce, a specialty of one Washington restaurant, Lafayette, until I've walked a mile in its shoes? And what can I do but applaud the semiotic mastery of the chef at Jaleo, also in Washington, who dreamed up a deconstructed clam chowder in which the clams, the bacon, the onions, and all the other ingredients come to you in separate heaps on a plate?

The world moves on. Change is the rule: if you don't want to evolve, you end up going out the way the trilobites did. I can dig it. For the past forty years I've wandered the world looking for new taste treats: you will not find me turning away timidly when they serve me the barnacle-burgers garnished with blueberries and black radishes, oh, no. And I'll have another glass of the Lithuanian chili-pepper cabernet, please.

We live now, after all, in the future I used to write about. It's been my job all these years to prepare the rest of you for what was coming. Now I have to get used to it myself.

And I will. I can see that peering into a restaurant menu from now on is going to be a real adventure. Well, fine. It's like if one of my own books was coming to life before my very eyes. ❍

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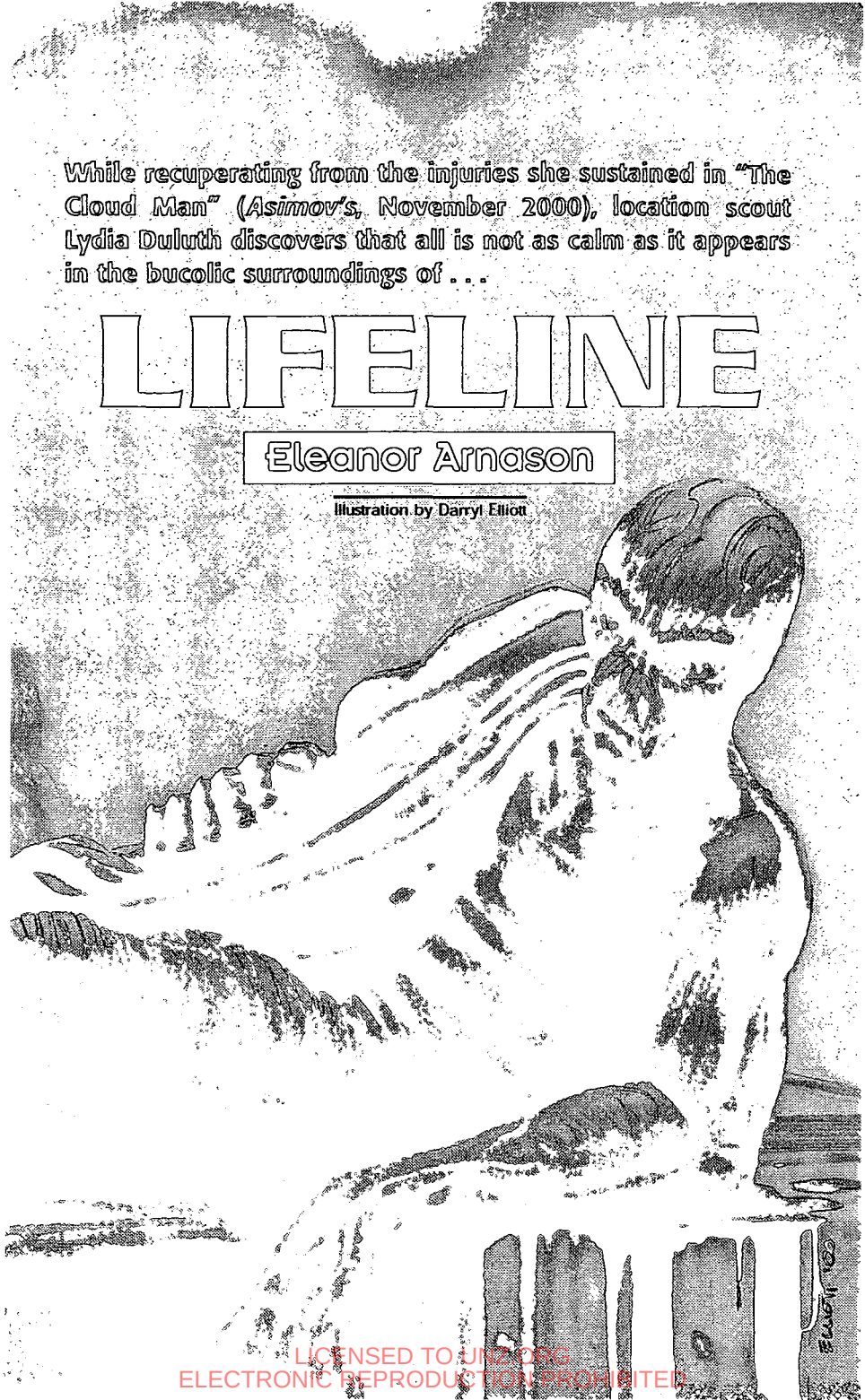
While recuperating from the injuries she sustained in "The Cloud Man" (*Asimov's*, November 2000), location scout Lydia Duluth discovers that all is not as calm as it appears in the bucolic surroundings of . . .

LIFELINE

Eleanor Arnason

Illustration by Darryl Elliott



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Lydia Duluth was vacationing on Lifeline: a cold, dry world except around the equator, where forests of huge trees edged a string of shallow oceans. From space, the equatorial forest looked like a blue ribbon around the white and tan planet. Hence its name in humanish. Astronomers at a nearby human colony had discovered Lifeline and persuaded the local AIs to send a STL construction ship. The ship built an FTL station; and human explorers came through to find, alas, that the planet was already settled.

This was not entirely a surprise. Even at a distance, Lifeline had looked odd. Up close, it was obviously unnatural.

Though a nice place for a vacation, Lydia thought. She had rented a cabin next to one of the shallow, barely salty oceans. Blue waves rolled in over white sand. The sky was a little hazy, but usually cloudless.

"We can have bad dust storms," her houseboy said. "But not this time of year. Thank the Father and Mother for axial tilt."

The "boy" was Atch: a slim elegant person who looked a bit reptilian. Maybe it was his skin, covered with an elaborate pattern in shades of green. His bare feet had six claw-like toes His fingers were more human-looking, though six in number, with pointed fingernails.

He settled her beach chair in an expanse of snow-white sand, then unfolded a small table, on which he put her book and a glass of carbonated water.

Lydia sat down. The chair adjusted to her rump and back, then unfurled its parasol.

"Not intelligent, of course," the houseboy said. "But very responsive."

He wore only an apron. Lydia did not know if the fabric hid genitalia or the brooding pouch his genitalia would become, once he had managed to impregnate a female. Not her business.

And we are on vacation, said the voice in her mind.

The cabin was behind her, one story tall and built of concrete with a turf roof on which grazed animals that reminded her of flightless birds. Chickens? Was that the right ancestral animal? How long it had been since she'd been a girl, studying the fauna of Earth in school!

The animals on her roof were the right shape and size, though the feathers bothered her. They were gold-brown, so sleek and shiny that the animals seemed covered in metal. Were chickens quite so scaly? And did male chickens have crests like the ones these animals had? Long, soft, golden plumes fell around their armored shoulders like hair.

In front of her, other animals that looked like birds—though of another species—soared in the hazy sky.

I have been observing you for years, said the voice in her mind. *I knew what you experienced, how it changed the neurotransmitters in your brain and the hormones in your blood. But only now can I can feel sunlight and water and flight. What extraordinary things emotions are! If I had a heart, it would lift and soar.*

What was worse? Lydia wondered. To have an ordinary AI fastened to the inside of one's skull, with metal-organic tendrils reaching into every part of one's nervous system? Or to have an AI with *emotions* embedded in one's brain? She could actually feel the AI's pleasure, an echo of her own pleasure at the sight of flying animals and cresting water. She and it were like two mirrors, reflecting each other forever.

Where is your sense of adventure? Here we are, a new kind of artificial in-

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telligence and a new kind of intelligent life. The two of us are going where no one—born or manufactured—has ever gone before.

Oh, put a lid on it, Lydia thought.

The AI was silent. She could feel its puzzlement.

"You have been staring at the water and frowning," the houseboy said. "Are you entirely happy? Is there anything I can do to increase your pleasure?"

Get rid of this thing in my mind, Lydia thought. She could feel the AI's hurt surprise. "No," she said aloud.

"Then I will go in and zealously dust," the Atch said. "We are a tidy species, also friendly and courteous."

Glancing at him as he left, Lydia saw his tail: prehensile, long and narrow, ending in a tuft of iridescent feathers. The tail twitched and coiled; sunlight hit the tuft; the feathers flashed green, gold, bronze, and purple.

An interesting species on an interesting planet, Lydia thought and turned on her book. Her chair adjusted its parasol a bit.

Murder at the Stargate. Safe reading for a vacation, since her employer, the famous holoplay company Stellar Harvest, stuck to action-adventure, romance, and religion. Sex traveled, her bosses said. Violence traveled. You could get a few light-years out of religion, especially when combined with song and dance. But psychology went nowhere; and mystery did just as badly, since it relied too much on how intelligent beings thought and felt. There was no way this book could become a Stellar Harvest holo.

Lydia looked at the ocean and thought about the planet she was on. When human explorers landed, they found a hundred million Atch living in the equatorial forest. Obviously they had been on Lifeline for centuries. Equally obviously, they were not native to the planet, having little in common with the local ecology; or rather, the *two* local ecologies.

Most of the planet was a frigid desert. The most complex forms of plant life reminded humans of lichens and (less often) mosses. The most complex animals were eight-legged bugs.

Except at the equator. There, explorers found bore holes, going deep into the planet's crust. Heat from these had been used to melt sub-surface water, creating the oceans. The holes were plugged with hardened lava now; the magma in them was cooling; and the oceans had begun to dry. They would continue to exist for centuries. The planet would not return to its former state for tens of thousand of years, though it was likely to become uninhabitable—or at least uncomfortable—long before.

The forest trees were highly modified versions of the planet's native lichenoids. A number of other plants, as well as many bugs, derived from the local flora and fauna. Other organisms—the gangle fish, for example—did not seem a part of local evolution. Clearly, the fish had been altered, so that they could survive on Lifeline and build their extraordinary nests in the lichen trees. Why, since one could hardly call them useful?

Wherever human scientists looked, they found odd combinations: genetic crazy quilts, which could never have come into existence through chance or Darwin. It was lovely work, this piecing together of material that came from different evolutionary lines. But why had it been done? And by whom?

The Atch swore they had found Lifeline—or, as they named it, Tchoon—like this. All their scientists had done was make the changes necessary for them to live on the planet. Not many, as it turned out. They were lucky. The already modified ecology proved easy for them to adapt and adapt to.

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We thought at first it might have been done by our creators, the Master Race. The transformers thought big, as did our masters. In addition to the bore holes, there are numerous recent craters in the desert. We think the transformers bombarded the planet with comets, to increase the H_2O.

But all this happened long after the Master Race vanished, leaving us as the most advanced beings in the known galaxy.

That was one mystery, Lydia thought, her book lying neglected in her lap. The other was the Atch. They had come to Lifeline centuries before in a fleet of STL transports. The ships were gone, their orbits long decayed; but there were artifacts scattered throughout the planetary system, too badly damaged by time to provide useful information, except that the Atch had explored their new home system before retreating to the one habitable world.

Surely they must have seen how unstable the environment was. If humanity and the AIs had not arrived, the Atch would have been doomed.

Where had they come from? They wouldn't say. Why had they come? Again, no answer. Why had they given up space? Another non-reply.

This was mystery number two, and far more intriguing than interstellar detective Agatha Lima's attempt to discover who had tampered with an FTL transmitter, resulting in Hong Rio's failure to coalesce at his destination.

No human has the knowledge to tamper with an FTL transmitter; and no AI will commit murder.

So much for *Murder at the Stargate*. Lydia turned it off and got up to walk along the beach. Small animals with exoskeletons and eight or ten legs scurried at the water's edge. There were shells, mostly empty. Lydia gathered a few, admiring their shapes and colors. She had almost recovered from the injuries incurred during her adventure on Tchel. Only a few aches remained, along with bad dreams. *Murder in the Rift Valley,* starring Lydia Duluth.

I did the killing, said her AI. *After seizing control of your body.*

I thought that AIs didn't murder?

It was self-defense. Those humans would have killed you; and the two of us are so closely intertwined that your death would have caused me permanent damage. I will not give up sensation or emotion, now that I have experienced them! Though they do make me queasy at times. What abysses of despair you feel! What heights of pleasure! Not to mention sore feet and popcorn wedged in the teeth!

Lydia laughed and tossed her shells one by one into the ocean.

That evening, she dined alone in her cabin. The houseboy served her. In artificial light, his eyes were iridescent blue-green. He had changed into a formal apron, covered with embroidery.

He's brooding, said her AI. *The apron says as much through the use of symbols. The mother's name is Predacious Bird. Her clan is Tree Full of Nesting Fish. His name and clan are not mentioned.*

Is it appropriate to congratulate him?

Yes.

"My AI says you are going to become a father," Lydia said.

"Your what?" asked the Atch, pausing as he spooned out soup.

Ah, damn. Her tongue had slipped. "I have an artificial intelligence—a robot—inside me."

"Why?" asked the Atch, as he finished spooning the soup.

"Do you know what they are?"

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"The intelligent machines? Yes. Some of my clanswomen have traveled to the stars, looking for a new planet for us. Thinking machines are everywhere among the stars, my relatives say. But I have never heard of one inside a person. Doesn't it find such a place dark?"

"It sees with my eyes." Lydia tasted the soup. Curried sweet potato. Was that possible? Of course, this resort catered to humans, a species that was notorious for liking to travel long distances, but only if they could find something predictable at the end of the journey.

"What is your name?" Lydia asked.

"Precious *Bin,*" the Atch said.

A plant similar to moss. After his children are old enough to leave the pouch, he will put them in a cradle lined with bin.

"What can I call you?"

"Bin."

"I'm Lydia."

"A strong name, I am certain," the Atch said politely.

After dinner, she went out on the terrace. The planet had one moon, large enough and close enough to be visible as a disk, though just barely; and it moved quickly enough so Lydia could see its motion.

High thin clouds stippled the sky. The moon sped among them. Beyond the clouds and moon and nearby stars, she could make out the Galactic Center, a band of dim light.

The Atch name for the Galaxy is Father's Semen, her AI said. *Or alternatively, Father's Milk.*

Do the males produce milk?

An equivalent liquid. The women do not.

What part do they play in reproduction? Lydia asked.

You have not done your research.

This is a vacation.

Yes. I am admiring and responding to the sound of waves rolling in, the taste of decaf espresso on your tongue, the mild wind, your own—our own—pleasant fatigue. O brave new world, that has such sensations in it!

Lydia drank more espresso.

The women seduce men and get themselves pregnant. As soon as a woman's pheromones begin to change, the man's genitalia change in response. By the time his mate is ready to lay her eggs, he has metamorphosed into a father. The eggs go in his pouch. His former mate takes off to find another man.

He, the father, broods his clutch with the help of male relatives. When the eggs hatch, he incubates the young in his pouch, feeding them on father's milk, till they have developed enough to live in the outside world.

Do the men become fathers more than once?

There is a genetic disorder called second fatherhood. The pouch changes back to genitalia; and the man in question can mate again. It's a rare condition and a cause for shame, according to my data.

She had done a brief check on the planet before coming, but had been more interested in the planetary modifications and the mystery of where the Atch had come from. Their reproductive habits had passed her by.

Ah well. The galaxy was full of oddness. According to the ancient aphorism, it was more strange than humans were able to imagine. How could one person, a humble location scout for a holoplay company, learn every kind of oddity?

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She walked across the beach's sand, ghost pale in moonlight and cool under her bare feet. Waves whispered in. At the water's edge, she paused and finished the espresso.

Maybe she had worked for Stellar Harvest too long. A who-done-it couldn't hold her attention. She wanted larger mysteries. How could anyone care about human psychology, standing here under an alien moon, at the edge of an alien ocean?

I can and do.

At last, she went inside. The dining room was clean and empty. A humming noise filled the cabin. It rose to a whine. Something shrieked. Lydia ran toward the noise.

She found Bin in his room, seating on his sleeping mat, playing a stringed instrument.

Lydia stopped in the doorway, heart pounding. Bin lifted his clawed fingers from the strings. "Is something wrong, Miss Lydia? Have I disturbed you?"

"I didn't know what the sound was."

"Music." The clawed hands returned to the strings, plucking and stroking. Once again she heard a hum. It became a whine. Bin opened his mouth and shrieked.

The shriek became a glorious, liquid trill, one of the loveliest noises Lydia could remember; then it became a choked gargle. She raised a hand, the almost universal sign for "stop."

"Of course." Bin rose. "My apologies."

"What were you singing?"

"A lament.

"Where is the fierce wild woman,
Who used to linger at my doorstep?
When my pouch filled with eggs,
Shetook herself away."

"Did you love the mother of your eggs?"

"My grasp of humanish is excellent, but not flawless. I think you have put your question in the tense used for events or conditions which are done and complete. I still love Predacious Bird."

"I'm sorry," Lydia said.

"I am not. She is a woman without equal."

Lydia went to her room and went to bed.

The morning was bright. She walked along the beach, gathering more shells, then had breakfast on the terrace. More familiar food.

After breakfast, she tried the mystery again. No use. It was an utter bore. Lydia gave up and opened her computer. In spite of doctor's orders, she had brought both it and her recorder. One never knew when one might find a spectacular location.

There was a collection of Atch songs in the computer's memory, fortunately in translation. Lydia read them, sitting in her beach chair, under the slowly moving parasol.

"Oh, my pouchling,
Stay here with your kinfolk!
Don't follow that fierce-eyed woman
Into the icy waste."

Was there a way to make a Stellar Harvest romance here?

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You are supposed to be relaxing and learning to understand the entity that you and I are becoming.

Sure, sure, thought Lydia, regarding the glittering water and thinking about plots. The trouble was, Stellar Harvest had no Atch actors. Could they be recruited? Or should the story use existing actors, most of them human, on this planet?

Cy Melbourne was turning out to be their best replacement for Ali Khan, now that Ali had retired to his home world—Earth, oddly enough—to raise roses and compose Sufic poetry. Cy was good at action, though not spectacular, as Ali had been; and like Ali, he could project sincerity. Even aliens believed that Cy would risk his life in defense of ideas such as conservation or fair play.

Maybe Cy could be vacationing on Lifeline, meet some Atch and become involved with their problems. What was an Atch problem, other than unrequited love?

Something was emerging from the ocean: a creature about a meter long with a round black shell and many legs. She couldn't make out a head.

Appearing beside her, Bin set down a fresh glass of sparkling water. "That is a *tlatchit*. It is native to this planet, a modified bug. It's coming to land to lay its eggs. If I weren't brooding, I'd dig them up and make an omelette. But it's bad luck to break eggs before one's own children are hatched."

Ponderous and headless, it struggled across the sand.

Bin said, "The male is half as big, but has two large, powerful front legs. One ends in a semen scoop, the other in pincers. It's a hard task to impregnate one of those females. They are aggressive, even toward members of their own species; and the process of inserting semen—using the scoop, of course—is long and delicate. He swims up from behind and snips off her head, using the mating pincers. That calms her down and gives him the time he needs. When he is done, he swims off, while she turns toward shore." He gestured.

"All of what you are seeing—the unerring trip to this beach, the landing, the digging of her nest—is done without a brain."

The creature was only a few meters away, digging fiercely, flinging up sand.

"That's a horrible story," Lydia said.

"It is the nature of life," Bin said. "My hobby is biology, an interesting study on this planet, since three evolutionary lines converge here."

"You said that thing is a modified bug. Does that mean someone, an intelligent being, created this form of reproduction?"

"Maybe yes and maybe no. Evolution moves quickly here, because of the mixing of unrelated genetic material, and because of environmental stress. It's possible that this creature evolved recently. But would it be wrong for an intelligent being to create something like that, since evolution does such things often? I find human reproduction disturbing. To actually carry the child *within* one's body, growing like a parasite or tumor! And then to force it out in violence and pain! How can children bond with their parent, after such a beginning?" He shook his head.

"My children are eggs now: three of them, all large and with a healthy color. In time, they will become delicate infants, curled together in my pouch, licking one another and my lactic pores. I will hear them chirping softly, feel the gentle pricking of their claws. If, some reason, I cannot care for them, they will go to a relative. Nothing I do for them is done unwillingly; and at

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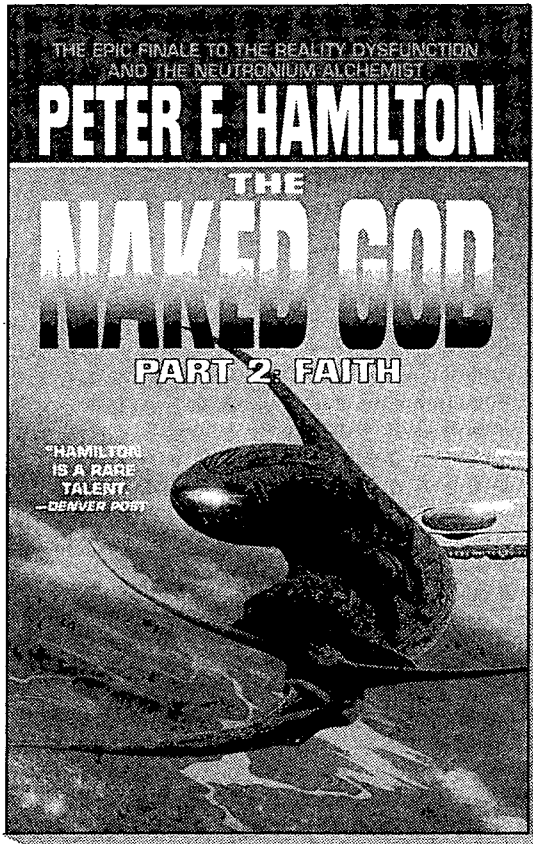

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no time are we impossible to separate. Surely, care is more worthy and admirable when it's given freely!" He paused.

"In addition, I find it disturbing that it is human females who carry and care for the children so unpleasantly. We are used to thinking of women as fierce, reckless, and dangerous. What species would put their young in the care of women? What cruel god devised such a thing?"

"You certainly can give a speech," Lydia said.

"Forgive me," Bin said. "I am new at this job and have not learned proper behavior."

He left. The *tlatchit* settled down to lay her eggs, a process that seemed both long and difficult. Lydia took a walk to avoid watching. When she got back, the beach was empty. Tracks led back into the ocean. The *tlatchit* must have gone home to die.

Several days passed quietly, which was a relief. Bin apparently decided he'd been too friendly and turned into the perfect aloof servant. The AI was only mildly irritating. The weather remained sunny. Lydia gathered more shells, read more Atch poetry, and swam in the ocean, which was surprisingly warm. Several boreholes ended below the ocean basin, the AI told her. Their magma heated the water and the land as well, though to a lesser degree.

Gradually, she relaxed. The last few months had been difficult, what with the adventure on Tchel and her stay first in a human hospital, then in an AI maintenance station. Now she had nothing serious to do and no significant pain. Buddha, what a blessing!

One morning, she came back from a long walk and found Bin in the dining room with several other Atch. One was stretched out on the dining room table, while the others tried to bandage her. There was blood—an interesting orange color—everywhere.

"What the heck?" said Lydia.

Bin turned to her. "You cannot betray us! We have studied your personal history. You were a revolutionary on your home planet!"

"That was long ago; and the revolution lost. What's going on here?"

"This is Predacious Bird," Bin said, gesturing at the Atch woman. She was larger than anyone else in the room, broad-shouldered, muscular, and naked. Lydia had figured out that she was female because she lacked both external genitalia and a brooding pouch. There was nothing feminine about her: no breasts, no pelvic width, nothing soft or pretty. On the plus side, she'd probably be a good person to have on one's side in a fight.

"Why is she bleeding?" Lydia asked.

"The police almost got her. She managed to escape, though they put a bullet through her. Oh, my darling!"

Predacious Bird snarled something in Atchin.

"We need to get her away from here," Bin said. "There's a hideaway in the desert. But the police satellites will be watching for any unusual travel. You could hire a vehicle, Miss Lydia. Everyone knows you work for Stellar Harvest. You can say you want to look for locations in the icy waste."

"Why should I help you?" Lydia asked.

A handgun appeared in Bin's clawed hand, the barrel pointing at her.

"Well, yes," said Lydia. "That's a reason."

I can disarm him, the AI said.

And rip up my muscles and joints, the way you did on Tchel? No, thanks. And there are too many people in this room. Wait a while.

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Yes.

The gun on her, she called resort central and ordered a sand car.

"It will be delivered at once," the desk man said. "Have you noticed anything unusual, Miss Duluth?"

"In what way?"

There was a pause. Apparently, the desk man did not want to worry guests. "People," he said at last. "Atch. We are a quiet species, respectful of property and life. But now and then, one of our women does something reckless."

"Like what?" asked Lydia.

Another pause. "You have noticed nothing?"

"It's a lovely day. I've had a very pleasant walk along the beach."

"If that's all you've noticed, I am satisfied and happy."

She turned off the intercom and looked around at the group of edgy Atch.

Bin handed his gun to another male, then reached under his apron, pulling out three eggs, their shells a lustrous pink. "You take these," he said to a third male.

The male did, tucking them out of sight.

"Now I'm ready," Bin said. "You and I and Predacious Bird will drive into the desert."

Only two, and one of them injured. She and the AI could handle this.

The car came, dropped off by one of the staff. Lydia took the operating card and a map.

"It's desolate out there," the person said. "Be careful."

"I will."

"But also lovely. Maybe Stellar Harvest will be moved to make a holo here."

"Maybe," said Lydia.

The staff person left. Predacious Bird came out, helped by two other Atch. She had clothing now: Lydia's dressing gown, which was floor length on Lydia. It came down to Bird's knees. Better than nothing, Lydia thought.

The injured woman was loaded into the car's back seat, and one of her helpers climbed in next to her. Another Atch loaded a bag—also Lydia's—into the trunk, then joined the two in back.

"You will drive," Bin said. "I will sit beside you and unobtrusively keep a gun on you."

So the odds were four against one. Not bad, considering that Predacious Bird was injured, and the AI's reflexes were extraordinary.

Off they went along a winding two-lane highway. The equatorial forest loomed around them. Now and then, the injured woman snarled in Atchin. Her mate translated the snarl into a direction.

Lydia's cabin was close to the forest edge, though she hadn't realized this. The gigantic, grey-trunked trees were soon behind them; and she drove among twisted shrubs, five meters tall at most. Like the trees, they had lacy blue leaves.

Also derived from lichenoids, her AI said. *Like the trees, they pull silicon from the soil and deposit it in their outer layers. When they are young, this protects them from the iki, who are ferocious herbivores.*

The what? asked Lydia.

The animals that graze on your roof; you call them chickens. By the time the plants grow to tree size, their silicon layer is thick enough to blunt tools, which is why the Atch use concrete for building rather than wood.

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Interesting, though not relevant to the current situation.

"What's this about?" Lydia asked the Atch, once she had reached a straight stretch of highway.

"Revolution," said Bin. "We are members of the Male Liberation Front."

"Predacious Bird as well?"

"Why not? Is there something wrong with altruism? I ask this not to be rude, but because humans are experts on revolution."

"What's the problem?" Lydia asked. "Why do you need a revolution?"

"We are not respected! Our work—the most valuable in the species—is seen as trivial and as a reason why we can't study, can't travel, can't do anything except brood and nurse, though we live decades after our children have left the pouch." He scowled passionately.

"If *we* are trivial, then all Atch are trivial! If we are respected, then the Atch will be worthy of respect! The rising of the fathers is the rising of the race!"

Oh dear, thought Lydia. He was a genuine revolutionary. There would be little room for negotiation here.

The shrub forest ended. The car moved through a landscape made of stony ground, boulders, outcroppings of a rough-looking rock. Here and there, plants grew. First they were a meter tall, then half a meter. Finally, they were colored patches on the rock: grey, blue, blue-green, yellow: lichenoids, the true natives of the planet. Overhead, the sky was hazy blue. At the horizon, dust hung as a grey-brown band.

The landscape kept getting bleaker. Rivulets of sand ran between the boulders and spilled down from low cliffs. Color came from rocks now: pink and white and yellow strata streaking the prevalent grey. Lydia's tongue was shriveling in her mouth. "Did you bring water?"

"We are not fools," said Bin and handed her a container.

She drank.

The road passed a pond, frozen to ice: a dull-grey, cracked expanse. The air was getting cold as well as dry.

Lydia closed the car's windows and turned on the heat. "How far?"

"It is just past noon now. We ought to reach our destination a little after dark."

In the back seat, Predacious Bird groaned.

"What was she trying to do?" Lydia asked. "Blow something up?"

"Research our history. 'Those who do not know history are doomed to repeat it,' as one human said. Another human said, 'People make history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly given and transmitted from the past. The traditions of all the dead generations weigh like a nasty dream on the brains of the living.' We have discovered why our fleet came here from the original Atch homeworld."

"Why?"

Predacious Bird snarled.

"Be quiet now," said Bin.

She drove without stop till nightfall. The landscape did not change, except in the distance, where low mountains rose, bare of snow. This region's water must be locked in permafrost. Now and then, Lydia saw a patch of lichenoid. No other life. The air in the car seemed thin.

"Are we going to be able to breathe?" she asked.

"Yes."

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At dusk, they reached the mountains' foothills.

"We turn off the highway now," said Bin.

Following his directions, she drove into a maze of canyons, created—she suspected—by flooding in the period when the planet was transformed. The ground under the car was rough, marked faintly by old tracks. At one point, her headlights, hitting a cliff wall, flashed off a frozen waterfall. How long had it hung there?

The canyon they followed grew narrower. Sheer walls loomed on either side.

Finally, there was nothing in front of them except tumbled stone, too high and steep to get over.

"Stop," said Bin.

She braked the car.

"Turn off the engine."

Lydia obeyed.

"Get out."

Now she felt serious fear. Bin could shoot her down and leave her in this wilderness, though she couldn't think of a reason why he would. Desperation? Revolutionary toughness? Out of the corner of one eye, she saw one of the men in back. He also held a gun. No way to get them both. Reluctantly, she stepped outside. Buddha, it was cold! Her breath hung in a cloud in front of her. Her nostrils prickled. Tears filled her eyes. She pulled up her jacket collar, hoping that would protect her ears, then jammed her hands in pockets.

Bin got out, then the two men in back, who helped Predacious Bird. This was the moment to act, except for the fact that the car was between her and her captors. Even with the AI's help, she couldn't vault over that hunk of plastic and metal. The AI must agree with her analysis. It did not seize control of her body.

"Come," said Bin. "Precede us."

Lydia obeyed again, thinking that she hadn't been doing well lately. In the past year, she had managed to get captured twice by groups of lunatics. Surely this showed some kind of failing. Lack of foresight? Gormlessness?

Of course, the galaxy was full of danger as well as strangeness. She did not find this knowledge comforting.

You are becoming agitated; and we are so closely connected that I am becoming agitated as well. Calm down. Let me analyze our options.

There was a narrow gap between the cliff wall and the rocks choking the canyon. Lydia squeezed herself in. Darkness and cold. She touched a wall. It felt icy.

A light glowed behind her: an electric torch. Bin held it in one hand. His other hand still had the gun. They were in a tunnel, almost certainly natural. Frost glittered on every surface.

"Move, please," said Bin.

She walked forward. There were footprints in the frost: naked and clawed. Atch had been here. The tunnel slanted down. Lydia became less certain that it was entirely natural.

Down and down. She came to steps cut in the stone and descended. The stairs were a spiral. Clearly, this was not natural, though the walls were still rough, and there were fossils in the rock: long, knobby stalks and cone-shaped shells. The frost almost hid them, though it seemed thinner than before. The air seemed warmer.

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The stairway ended. They had reached a metal door: huge and badly corroded.

"We had to treat it with solvents," Bin said. "Then force it open, then rehang it on new hinges. We think it's more than two thousand years old. Take hold of the ring and pull it open."

She did, her palm sticking a little to the cold metal. Nothing as bad as when she was a kid and someone dared her to lick a metal railing. Now that was pain!

Inside were electric lights, an electric heater glowing red and the hum of a generator.

"It's set on a timer," Bin said, "so this place never becomes unendurably cold."

An anteroom, cut in the rock. The walls were covered with engraved symbols; writing almost certainly, though in a script she did not recognize. Not humanish. Not modern Atchin.

Bin said. "This is an archive, established after the settlement of Tchoon, in a period of reaction, when it looked as if all the sacrifices of the original settlers would be for nothing, and all their hard-won achievements might vanish."

"As they have," said Predacious Bird in humanish. "Progress can always be pushed back. Truth can be replaced by lies. The free can be turned to prisoners." She stared fiercely at Lydia.

"It may be the nature of history to progress like a drunk walking, going ahead, then sideways, then back, then ahead again. One's hope is—in the end, something is gained, some advance made. But no rule says this must happen. As Marx and Engels tell us in their magnificent *Communist Manifesto,* the struggle can end either in the revolutionary reconstitution of society or in the common ruin of the contending classes; though we Atch do not believe in classes. There are only sexes, regions, and religions. Most important of these are the sexes. The struggle between women and men will determine the fate of the Atch!"

I could attack them now. They are in the right kind of positions. But this has become interesting. I'm going to wait.

There were folding beach chairs against one wall. The other Atch opened them and set them around, then helped Predacious Bird sit down and fussed over her, until she snarled in Atchin and gestured them away. This done, she pulled her tail into her lap and played with the iridescent tuft.

"You sit down as well, Miss Lydia," Bin said.

Go on, said the AI. *If necessary, I can get you out of the chair quickly.*

Interesting to have something inside her, which could turn her into Ali Khan in his very best days. Of course, the wear and tear on her infrastructure was huge. She sat down, feeling the AI tug her into exactly the right position.

"I was coming to see you when I was ambushed," said Predacious Bird. Her head lifted; and her eyes reflected light, flashing purple-red. "There is a spy among the liberation forces, Bin. He or she must be found!"

"Yes," said Bin.

"And killed!"

"Yes, dear."

"Why me?" asked Lydia.

"In part because you are human and an employee of the famous holoplay company, Stellar Harvest. More importantly, because you have a robot in

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your brain. I have traveled among the stars. I know the AIs are the galaxy's true rulers."

We do not rule. We expedite and watch.

"The news of our struggle and what we've found must get off planet. As the old proverb says, 'Everything drowns, if the well is deep enough.'"

Her AI said, *?*

I haven't a clue, Lydia answered.

"There have been rumors of ruins in the desert for generations," said Predacious Bird. "Now and then some artifact turns up in one of our markets, clearly old, but with no history, no—what is the word in humanish?—provenance. My dear teacher, Quick Fish, believed these artifacts had been recovered from hidden sites which dated, she believed, from the first days of Atch settlement. She began to look for the sites, using aerial maps of the planet and old histories, but—most of all—the artifacts themselves." She glanced at Lydia.

"Quick Fish had the finest, most discerning eyes of any art historian, Atch or human, I have ever met. Though our term is not 'art historian.' We would say 'artifact historian' or 'historian of made things.' The human concept of art as something separate makes no sense to us. Is a well-made spoon less lovely than a tapestry? Is a defecating station less worthy of consideration than a fiddling stone?"

"I will not argue this issue with you," said Lydia.

How can you? You don't know what a fiddling stone is.

Do you?

No.

"Fish examined every artifact found, looking for similarities among the objects and mapping the markets where the objects had first appeared. The idea, of course, was to find a market where a number of similar pieces had surfaced, then look at the desert near the market." She sighed.

"What a patient woman she was! She searched for years. I, in the meantime, went to the stars. When I returned, she was dead, killed in a car accident along with several students." She paused.

"I mourned them all! My first husband was among the students. Fish was unusual in teaching history to men. Not all men, of course. Early Mist was extraordinary in his intelligence and determination. Fish's message arrived when I was almost done mourning, having followed me to the stars and back."

Either her species mourns briefly, or we will have to look into message delivery in this part of the galaxy.

"She had told several of her colleagues what she'd found in the desert; and their reactions worried her. To them, her discovery was a threat; and they warned her not to publish. Therefore, she sent her information to me, safe—she thought—among the stars. Included was a map that she had discovered at her original site. On the map were marked several other sites, other archives. She did not have time to visit them before the accident. I, of course, went to the site she had explored. A landslide had covered it.

"Tracks vanish slowly in the desert. I found evidence of several cars. I suspect they did not all belong to Quick Fish."

"Murder?" asked Lydia.

"The accident? Possibly. I certainly believe the landslide was not a natural event."

I cannot use your vocal cords as yet. Ask what her teacher found!

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Lydia did.

"I will tell you in time," said Predacious Bird. "I went to the other sites on Fish's map. In many cases, the site was gone, destroyed by time, accident or intent. In other cases, it was empty, looted.

"At last, I found this." Predacious Bird gestured around at the stone walls. "As Bin said, it is an archive, built in the early days of our settlement. In it we have found the true history of the journey to Tchoon or, as you humans call it, Lifeline."

The Atch woman paused, looking tired. Her skin, patterned like an Earth snake or the *loowt* on Lydia's home planet, had turned grey-green.

"Should you not rest, dear?" asked Bin, rising from his chair. Lydia could jump him now, she was certain, and grab his gun.

No, said the AI.

"I will tell this story!" Bird cried.

"Yes, dear." Bin sat down.

Predacious Bird was silent, obviously gathering her thoughts and strength. Finally she said, "There was a religious conflict on our original world. Conservatives believed that god was female, since god created life; and life comes from women, as all of us know. Radicals—maleists—said god must be both female and male, because it takes men and women together to raise children. Women, after all, don't lactate; nor do they have brooding pouches."

After a moment, she continued. "The conflict led to a war. This was in the period after the home planet had been industrialized and the home system colonized: a dangerous period in the history of any culture, when religious reaction is common. One step forward, two steps back! Intelligent beings can endure only so much change!

"When it became obvious how much damage the war was doing, a peace was negotiated. The radicals were permitted to build a fleet of STL ships and sent off with the best of wishes.

"The fleet traveled for centuries. Lacking frozen sleep, we lived for generations in the void. Messages from the home world followed us. Apparently, the home culture was damaged by the removal of the species's most tender women and forceful men. The oppression of males, fathers especially, grew more severe and nasty. Women grew more warlike, more willing to harm. The last messages our fleet received, before the radio signals became unreadable, spoke of a world war. How bad it was and how it ended—we do not know.

"As for our fleet . . ." Predacious Bird stopped. The other Atch clustered around her, looking worried. She snarled and waved them off. "The first system they reached had a planet that looked good at a distance, but turned out to be uninhabitable by our species. The second system also proved unsatisfactory. Finally, our ancestors arrived here. Obviously, there were problems with Tchoon. But our ships were breaking down; we had reached the limits of our resources; and the odd biology of Tchoon made it possible for us to fit in. We had underestimated how hard it is to settle a planet with a different evolutionary history; and our biologists—good, I am sure—were not equal to you humans now. It is possible, more than possible, that they could not make the changes necessary to adapt us to an ordinary alien planet. But Tchoon was not ordinary. Here we could live." Predacious Bird leaned back in her beach chair, waving at the stone walls engraved with script. "Now comes the irony. It is a concept you humans understand, I believe?"

Hell, thought Lydia, we *invented* it!

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In point of fact, the AI said, *it has been invented over and over by intelligent life forms. But not by us.*

"Our ancestors forgot why they had come. The dominance of women over men, which may be natural in our species, was reestablished. The twofold god was forgotten, except by a few eccentrics and historians. Maybe the journey had been too long and difficult. Maybe the process of settling here tried our ancestors too severely. In any case, the old system was reestablished, though not without a struggle. The settlers fought a war on Tchoon. The radicals lost; and in their last days, knowing they were about to be destroyed, they built archives like this one." She gestured wearily.

"I need to rest. Bin will lead you through the archive."

Go with him, said the AI. *This is interesting.*

Bin rose, as did Lydia and one of the other males: a slim fellow with a bright green skin. He looked younger than the others, though Lydia wasn't sure why.

They went through a second door, also metal, into a new corridor, this one cold and dry. Bin's electric torch played over the stone floor and walls. Side doors appeared infrequently. Most had been opened by force. They hung off their hinges. Glancing in, Lydia saw only darkness.

The corridor ended in a spiral staircase, this one metal, descending into—she did not know what.

Are you sure about this? she asked the AI.

How it will end? No. That is it worth the risk? Yes.

Of course, if she died, the AI would probably survive. The other AIs would search for it and retrieve it from her desiccated corpse. The risk for her and the creature in her brain was not the same.

True.

On the other hand, she was curious. She climbed down the coiling stairs. A vast darkness surrounded her.

Above and behind her, Bin said, "This is a natural cave. Very large and dry now, though it was created by water, most likely when the planet was transformed." The light produced by his torch probed out. Stalactites hung from the ceiling, glittering. Not frost this time, Lydia realized after a moment. Crystals. The cave was a geode. Bin's light kept moving. Everything—the ceiling, the distant walls, the floor—flashed and gleamed. "It's time for you to start recording," Bin added.

"I don't have my recorder."

"We brought it. Shadow?"

The second male, directly behind her, reached into a satchel and held out the recorder: a top-of-the-line Ljotmal, marked with Stellar Harvest's corporate emblem, a sickle made of stars. Lydia took it and checked the display. Power was good. The light level needed adjusting, also the focal distance.

Pausing on the stairs, she made the adjustments, then began to record.

Above her, Bin said, "The rooms upstairs are full of machinery, none of it operational. If you want to leave a record that lasts, rely on stone or plastic. Metal will corrode, even in a place this dry. We had to repair this stairway. It's safe now."

She stopped recording and continued down the stairs, the two Atch men following.

At the bottom, Bin moved ahead of her, his light playing over the glittering cave floor. People had been here many times before, breaking off the crystals, crushing them.

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"Aim at the stairway," she told Bin.

He did. She turned and recorded the frail helix. Now off it, she decided that it did not look safe.

They went on, crushing more of the crystals. Her hands and feet were getting numb. "How can you endure the cold?"

"Wearing almost nothing?" Bin said. "We believe that our species evolved in a desert climate; we have a high tolerance for both heat and cold. Or maybe the tolerance is an adaptation to this planet."

They reached the cave wall and found another door, this one closed. The second male—Shadow?—opened the door. They entered a room cut from rock. The walls had long horizontal recesses. Shelves, thought Lydia, filled with the kinds of objects one expected to find on shelves: ceramic pots; small pieces of sculpture; rolled-up scrolls; and things that looked almost exactly like ancient human books.

It was surprisingly ordinary, though dust lay thick on the floor, and the metal objects were touched with corrosion.

"The scrolls and books are plastic," said Bin. "It has become brittle with age. Opening the scrolls is extremely risky. The books are easier to read; and we have read them. Begin recording, please!"

She did, as he played light on the shelves. "There is more to the story than Bird told you. I think she was becoming tired."

Lydia flipped on the recorder's audio.

"The fleet did come here to establish an equal society, where women did not oppress men. The effort failed, and we regressed to our present state."

He paused briefly, the light finding a pair of statues: one was a female, leaning on a spear. The other, shorter and slighter, was a brooding male. No question of his condition, given his size and shape. The light moved on, touching a round pot with a black glaze, then something that looked like a model of a machine.

"We are unlike humans in that our females are capable of reproduction without a male. It happens rarely in modern society and is considered unnatural, embarrassing. Among other things, how are such children to be cared for, since they lack a father to brood them? All the children produced by this—what is your human word?"

"Parthenogenesis."

"Thank you. Odd, that you have a word for a condition that does not exist among you."

"We have words for centaurs and dragons too," Lydia said.

"Beg pardon?"

"Never mind. Go on."

Bin did. "All the children produced are female, clones of the mother. It may be this ability serves an evolutionary purpose. Normal Atch men become fathers only once, though they retain their pouch; and most can nurture a second clutch of children. In really difficult times, when there are too few children and too few fertile men, the women can produce at least some children on their own. This theory was suggested by one of Quick Fish's students; but she did not get a chance to develop the theory. She was one of those who died with Quick Fish in the accident."

He swept an arm at the archive around them. "This was not known by our ancestors. To them, as to us, asexual reproduction was rare, a mistake of nature. But when they settled on Tchoon, enduring the extreme stress of the early years, it became suddenly common. We came here to establish a soci-

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ety where men and women could live together cooperatively. All at once, our women were producing clone-children.

"The transformation that men undergo, the formation of the brooding pouch, happens in response to female hormonal changes. Imagine what happened to our ancestors! The women became pregnant without the help of men, and the men changed into fathers. By doing this, they lost the chance to produce their own children; and the women expected them to nurture the eggs that had doomed them to sterility!

"Not all women became parthenogenic. A third at most, we think. But it was enough to cause a war. Remember, in our species, women lack the physical ability to nurture. Nor do they have nurturing minds. The parthenogenic women wanted fathers for their eggs." He waved a hand.

"We were on an alien planet, not sure that our colony was going to survive. In the opinion of most women, every child was precious and necessary. If men—many men, possibly most men—could not have their own children, well, that was a sacrifice that must be made for the good of society." He laughed bitterly.

"The men fled into the desert, hoping to preserve their ability to reproduce. The women followed. In this icy waste, a war between men and women was fought. Though there were men and women on both sides, as Bird may have mentioned.

"Atch men have never been warriors; and many of us were brooding or nursing. How could we defeat the women, even with women on our side?

"We lost. Most of us were captured, except for widely scattered bands, who built archives like this one.

"For several centuries, the men were—what is the word in humanish?—prisoners or slaves. They were a minority as well, since many of the women continued to produce clone-daughters." He paused.

"But it turns out that children produced through sex are hardier than clones." Bin bared pointed teeth. Was it a smile? "As life on the planet became less difficult, the number of clone children produced diminished, till they became once again embarrassing freaks. We returned to the old way of reproducing. Men regained some freedom. It's easy to control us, when we are nurturing our own children, and the women could afford to allow us a longer leash or chain."

He paced back and forth. "Predacious Bird thinks this story is about justice. I think it is about reproduction and nurture. The right to have one's own children. The right to refuse fatherhood, when fatherhood seems wrong or harmful to oneself. The right to be a person, rather than a pouch!" He fell silent for a moment.

"The rebels lasted for several generations, hiding out in the desert, building hideaways like this. Finally, they vanished. Some were killed by the government, others by the hard life here. Some crept back to the colony."

He laughed. "One step forward, two steps back! As Bird told you, there is nothing inevitable about progress."

His tone seemed bleak to her. Maybe she was reading into it. "Are you going to give up?"

"Of course not. Nor will Shadow. Most of all, Bird will continue. There is more to show you."

The door to the room groaned, opening wider. Bin and Shadow whirled, aiming their guns.

Now, thought Lydia.

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No.

The third male came in, obviously in a hurry. He said something in Atchin.

"The police have found us," Bin said to Lydia. "My friend here needs help in moving Predacious Bird. If that proves impossible, we will try to hold the fort. You must escape. This story must be known. Shadow will take you."

The second male produced an electric torch. "Come!" he said in humanish.

A moment later, they were outside the room, hurrying over the cave floor toward the unsafe-looking spiral staircase. Not that Lydia could see much, except the broken crystals directly in front of them, lit by Shadow's torch.

He ran up the stairs, his light flashing on metal treads and coiling metal banisters. Lydia scrambled after him, breathing heavily. The injuries she'd gotten on Tchel began to hurt.

At the top of the stairs, Shadow turned left: a new direction, leading into a corridor that slanted up.

"Can't keep up," Lydia gasped.

They slowed to a walk.

"We have a truck hidden nearby," Shadow said after a while. "But if we use it, the police will see us. Better to lie low. The cave with a truck has a heater and supplies. I suppose I should introduce myself. I am Flower-in-Shadow, a child of Bird's first clutch of eggs. My father was Early Mist."

"You know my name."

"Lydia Duluth, a location scout for Stellar Harvest. Does the AI in your brain have a name?"

Yes, but not one that can be translated.

"Not one I can say," Lydia told Shadow.

"What is it like, having a robot in your mind?"

"Peculiar at first. I've gotten used to it. Mostly."

Then they were silent, climbing up through dark, cold corridors. The air smelled of dust. She couldn't tell what was worst: the pain in her joints, growing increasingly severe; her lungs laboring to find enough oxygen; the numbness of her hands and feet. Hard to walk on cold feet. Hard to walk when every joint hurt. Hard to think or keep going with a brain that was starving.

Finally, they came to a door. Shadow opened it. They stepped out under the stars.

"We are on top of a butte," said Shadow quietly. "There is a crevice here, which we will follow. In complete darkness, of course." His torch was off. "Try to be silent."

She followed him along another corridor, this one natural, its walls and floor rough. The ceiling was blazing stars. Her recorder bumped against her hip as she walked, then stumbled, her mind growing ever more unclear.

Let me, the AI said, and took control of her body.

A very strange sensation, to be walked by someone else. It made her want to scream; but Shadow had asked for silence. On the plus side, she no longer had to concentrate. Her mind could drift into greyness. Let the AI, who was untroubled by fatigue or cold, handle the situation.

I am untroubled by cold, but we need to get you someplace warm.

The crevice sloped down, becoming a narrow canyon. There was rubble underfoot. She tripped often.

Can't you do better? she asked the AI.

I'm only as good as my equipment; and you are in increasingly poor condition.

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Finally, the Atch ahead of her stopped. She stopped also, staggering and almost falling. "Here," said Shadow and led her through a crack in the canyon wall.

There was a cave beyond. After they had gone several meters, Shadow turned on the torch.

It was a small space in the rock, worn smooth by water. There were no stalactites, no crystals. On the other hand, there was a generator, a heater, a heap of supplies and a beat-up truck.

Utility before beauty, Lydia thought, sat down on the cold stone floor and lost consciousness.

When she came to, she was under a foil blanket. Close by, the heater glowed red.

"I think you will recover and keep all your extremities," Shadow said.

"Good."

"Are you hungry?"

"No."

"You should drink something. I have heated water and made some human tea. We brought some of your food, in case this trip took more than a day."

She sat up and drank the tea. Assam, she was almost certain. There had been a tin in her cabin. Her hands were still cold. She wrapped them around the hot cup. "What are we going to do next?"

"Wait. If the others manage to escape, they will join us here."

"Do you think they'll manage?"

"No. My mother can barely move. Bin will not leave her. By now, I suspect, they have been captured, unless they are dead. We have no gift for revolution. I think it's because our men are so preoccupied with fatherhood, and our women, while fierce, cannot equal the fierceness of human men." He sighed.

"We thought we might be able to learn how humans do such things. My mother read books by human revolutionaries and took notes; she's a careful scholar; though her area of specialization is Atch artifact history, rather than human violence. In addition, she read histories that told how humanity has struggled against itself. What a contentious species you are! And all this fighting gets you nowhere! You never get what you hope for. This is my opinion. Predacious Bird thought something could be learned from you."

Lydia finished the tea, setting down her cup. "I'm not sure we get nowhere. But it's been a long process; and we're a long way from where I want to be."

"You were a revolutionary, weren't you? On your home planet, years ago?"

"Yes."

"Did you achieve anything?"

"On bad days, I think not. On good days, I think—a little. I make a better holoplay location scout."

"Why aren't you in prison? Or dead?"

"The AIs became interested in me, not as an individual, but as a type." Lydia grinned at the Atch man. "They call it the problem of the avant garde. Why does humanity produce so many people who don't fit in, who try to change human existence—oh, in various ways. Our politics, our society, our art, our intellectual systems, our morality.

"As a group, the avant garde produces fewer children than other humans; and our utility to the rest of the species is not clear, because the rest of the species tends to ignore us. So, why do we keep appearing? Most of what we

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have contributed to human history is an interesting series of failures. Shouldn't we be pushed out of existence by more successful and prolific humans?"

"Is there an answer to these questions?" asked Shadow.

"Not yet. But the AIs study us—in some cases closely. I got picked for close study. In return for allowing the AIs to implant one of their kind in my brain, I was freed from prison. They have a lot of power, when they choose to use it. They control the stargates. Without them, there is no FTL." She shifted her position, so she could lean against the cave wall. The air around her was getting warmer. Ah, blessed heat.

"You know," she said after a while. "If you have to read Marx and Engels in order to learn about revolution, then maybe you really don't have a gift for that kind of struggle."

"Should we give up, and be made insignificant by history and women?"

"No," she said. "There is such a thing as justice."

"And dignity," said Shadow. "How I long for it!"

"But you can't buy your method of struggle at the market like a book or gun. It has to be rooted in local conditions."

You are mixing metaphors, her AI said.

Shadow thought for a moment. "Rooted like the trees of this planet, which are armored with silicon they've drawn from our soil, so they are almost impossible to cut down. I like the image. But we Atch have no native tradition of revolution. How can we root ourselves in something that does not exist?"

"Think about the traditions you *do* have," Lydia said.

Shadow was silent, looking at the heater's red glow. "Religion," he said finally. "The twofold god. That might be possible. He and she certainly became an uncutable tree on our home planet, and not everyone here has forgotten them. If Bin and my mother are dead, as I suspect they are, they could become sacrifices to religious truth. There were many holy men and women in our home system, who died for twoness." He shook his head.

"But what if we have to go through it all *again?* A civil war? A flight from here to—who knows where? Another period of suffering on a strange planet, and parthenogenesis?"

"The parthenogenesis could be treated with modern medicine," Lydia said. "I don't know of a cure for war."

"Maybe we should leave things as they are," Shadow said.

"That's your decision."

Ask him if he has a computer.

Lydia did.

"Two," he told her. "Yours, which I brought along in my satchel; and one which we keep here."

And a satellite disk?

Lydia asked.

"Yes, but you can't use it. The police might track your signal."

I must.

"The AI wants to send a message," Lydia said.

"No!"

Lydia was suddenly on her feet. Looking startled, Shadow scrambled upright. But she was already diving. She hit him waist-high. Buddha help her, if he was carrying eggs! He screamed as he fell, knocking over the heater. She landed on top of him. He struggled, still screaming. Buddha! He was on the heater!

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This had to end. She kneed him in the groin. He screamed even more loudly, curling up. Lydia rolled off him, grabbed his gun, stood, and kicked the heater away. "Okay, okay," she gasped. "That's enough. No more fighting."

Shadow groaned, still curled. Lydia smelled burnt flesh. His back, almost certainly. She moved around, till she could see it. Yes, there were burn marks on the skin: dark parallel lines, made by the heater's elements, which clearly did not have an adequate garde. The thing was a hazard. The manufacturer should be sued.

Lying on his side, in a position that reminded her of a human fetus, he didn't seem dangerous. Anyway, she had the gun. Lydia went to the supply heap and hunted through it till she found a metal box. The label was in Atchin, which she could not read. But the size was right and the contents unmistakable: jars, tubes, rolls of tape, fabric patches wrapped in plastic. She carried the box back to Shadow. "Is there anything in here that will help your back?"

He lifted his head, hissing angrily, then pulled a jar from the med kit. The stuff inside was yellow and oily. She spread it on his burns, then covered them with fabric and tape.

By this time, he had uncurled a little. "What about the pain?" Lydia asked.

He pointed to a jar of pills. She gave it to him. He took several.

You'd better tie him up.

Give him a little time, Lydia thought in answer, and stepped back a pace, putting her hands in her jacket pockets. The gun rested in one, a comfortable weight.

After a while, the Atch man sat up and fumbled at his apron's tie.

"Let me," said Lydia and untied the cord. Shadow pulled the apron off and looked down at his groin.

"Am I all right? Do my genitals seem ordinary to you?"

"Are they supposed to be green and purple?" Lydia asked.

"Yes."

"And have all those frills?"

"Yes."

His groin looked as if a flower bloomed there: intricate and delicate, like an orchid in the capital city conservatory on her home planet. How could such an array of frills and curlicues make anyone pregnant?

A question she could not answer. Well, this was not her species.

He began to examine the injured organ. Lydia looked away. Out of the corner of one eye, she saw him straighten one part, smooth another, coil a third around one of his fingers. Buddha, he was fluffing! The pain killer he took must be remarkably effective. He could hardly have done any of this, if he'd been feeling pain.

Finally, he stopped.

"Are you okay?" Lydia asked.

"Possibly. With luck, I'll be able to become a father. Someday, given time to heal. What a violent person you are!"

"Not me. The AI did it, using my body."

That is not entirely true. I made the dive. You kneed him in the groin. What an effective action! It would never have occurred to me.

Shadow glanced up. "Why?"

"It wants to send a message. I'm going to have to tie you."

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"As you wish," said Shadow. "Just don't attack me again. You are more dangerous than the police."

She felt guilty for a moment, then used the med kit tape to fasten his hands and feet. The tape looked sturdy, though it could hardly be equal to human duct tape, which was impossible to cut, unless you had a duct tape knife. One used what one had.

She closed the med kit. Shadow was lying on his side, hands fastened behind him, looking uncomfortable.

What next? she asked the AI.

Your computer and a disk.

She found them in Shadow's satchel. This was definitely a full-service kidnaping, everything provided.

Set up the disk at the entrance to this cave.

She did, settling next to the disk. There was no light except her computer screen, turned low, and the brilliant desert stars.

I got an upgrade when we were at the AI maintenance station. I can now interface with human equipment, though it's not a pleasant experience. Get out your computer-to-computer cable.

The cord ended in two plugs. They were the usual kind, cylinders containing many narrow prongs arranged in a half circle. How long had humans been using these? Millennia?

Twist one.

She did. The cylinder folded in, till nothing remained of its opening except a pinhole. Through this came a single wire: glassy and very fine. It shone in the screen light, transparent, with hints of color.

This is my plug, the AI said. *Feel the crown of your head. You will find a small depression. Push the wire in there.*

She felt pain as the wire went through the narrow covering of skin and muscle. That lasted only a moment. Then the wire hit bone.

Twist! said the AI. *Wiggle.*

She did. The wire found an opening and entered. There was no more pain. Instead, she felt the AI's satisfaction. Obviously, there was a socket in her skull, and the wire was in it.

Now, go on-line.

The other end of the cable went into her computer. She hit a key. The screen and the starry night vanished. Instead, she saw a tangle—a rat's nest—of multicolored lines.

Horrible, isn't it? said the AI. *That is human logic.*

The lines flickered rapidly, writhing like hyperkinetic worms, twisting around one another, twisting apart. Sometimes, briefly, there were patterns that looked coherent. Then these dissolved into another rat's nest.

She hit another key, establishing contact with the planet's net. The tangle got worse. There were more lines, twisting even more madly, extending in all directions. She was in the middle of a frenzy of worms.

Most of this system is human made. Of all intelligent life forms, humans have done the most with computers; and it all looks like this!

The AI had control of her hands now. It entered instructions. They began to move through the tangled net. An illusion, of course. She was—she had to be—sitting at the entrance to the cave, legs folded, freezing under the brilliant stars. None the less, the illusion was convincing.

How to describe what happened next? A journey through a witch's wood of living trees? Through a nest of serpents? Into a tangle of sea silk, animals

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that made the oceans of her home world places of sudden unpleasant surprise?

Everything around them twisted, tangled, broke and reknotted at horrific speed.

Maybe this is an analog for life: messy, unplanned, made up off the cuff, on the spur of the moment. Maybe everything humanity makes will be—inevitably—kludgy. Though there are, I admit, some interesting surprises in your programs, as in your lives.

Gradually, the lines grew fewer. They were moving into a part of the net that was not much used.

Then they were in a new place. How to describe it? Transparent, crystalline, full of light, as if they stood in the middle of a gigantic diamond; though it was far more complex than an ordinary diamond. She had a sense of layers, going back and back, all perfectly transparent.

This, said her AI, *is the operating system for the local stargate. If you will please stay here, I will go talk to some of the other programs.*

She stood, amazed. In the distance, things like—What? Fish? Or space ships?—moved through the crystal matrix.

She waited. Her AI returned, escorted by the things like fish. Close up, it was obvious that they were not organic. She had a sense of pristine clarity and beauty, like something out of her childhood math classes. Why hadn't she taken more math?

Done, said the AI; and they were outside the diamond. Lydia felt like weeping. For once in her life, she had been where mathematicians went, though she wasn't certain they ever saw anything so pure and clear. Now she was exiled.

Come, said the AI. They went back through the tangled, twitching human net.

She came to, stiff and cold. Overhead, the sky was paling. She took the jack out of her head and folded her computer. Buddha, what an experience! She hated vacations where things happened. You always came back to work unrested. Somehow, she made it to her feet and stumbled into the cave.

Shadow lay under the foil blanket. Close by, the heater was upright and on. Had she done that? She couldn't remember. As she entered, he lifted his head. "What have you done? Are the police coming?"

I have asked the stargate programs to contact the Atch government. These people are the clearest example of a futile vanguard I have seen outside humanity. Obviously, we must study them. We will offer them what we offered you.

"The AIs are coming," Lydia said. "You'll have to decide for yourself whether this is good or bad."

She pulled a foil blanket off the supply heap, lay down and went to sleep.

The police arrived midway through the next day: tall Atch women with rifles, dressed in kilts, heavy jackets, and winter boots. An odd costume. None the less, the women were impressive. An AI accompanied them. It was the same height as the cops, though it walked on four legs. The head was wedge-shaped with protruding sensors. The arms—it had two—were long and looked complex.

A bug, thought Lydia. A two-meter-tall bug, moving delicately on thin metal legs. The sensors on its head turned, scanning.

"You are under arrest," said one of the cops.

"Fine," said Lydia.

"Actually, no," the bug said in humanish. "We are taking Miss Duluth and

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her companion, also the other revolutionaries. If any of them wants to return here to be imprisoned, he or she can—except for Miss Duluth, of course."

The bug reached Shadow, still lying down. One of its long arms unfolded pincers and lifted away the foil blanket. Then the arm extruded a knife and carefully cut the tape holding Shadow. The knife blade vanished. Both arms produced four-fingered metal hands, which helped Shadow stand.

The Atch male swayed and almost fell.

"You have not treated him well, Miss Duluth," said the bug.

Lydia rose. All her joints hurt. "The hell you say! He kidnaped me! All I wanted was a vacation by the ocean."

"You cannot deny us this arrest," one of the cops said.

"Indeed I can," the bug replied. "Ask your government if they want to lose our stargate. We have a plane outside, Miss Duluth. Fortunately, I was on the planet when your call came through."

The bug helped Shadow. Lydia hobbled after them out of the cave, then down the canyon. Lifeline's primary was overhead. Pale sunlight filled the space between rose-pink canyon walls. Here and there, on the canyon floor and walls, were small round patches of grey: lichenoids.

The canyon ended, and they stood in front of a VTL plane. Lydia looked back. One of the cops had followed them: a grim-looking woman.

"How can you do this?" she asked.

The bug said, "We gave you the stars. In return, we ask little. A few people like these. No one you will miss."

It helped Shadow into the plane. Lydia followed and fell into a seat. Before the plane rose, she was asleep. When she woke, they were landing at her resort.

"Go back to your cabin," the bug said to Lydia. "I will deal with the local authorities and make sure your fellow rebels get decent medical treatment."

"My fellow rebels? I had nothing to do with this rebellion!"

The bug examined her with various sensors, saying nothing. She climbed off the plane and called for a car. It delivered her to her cabin. By now it was late afternoon. High, thin clouds covered most of the sky. The ocean glittered dimly.

How long had the journey been? Two days? Lydia felt as if she'd been gone a month. Well past time for a shower. She turned the spray to hard, ran the water till it was genuinely hot, and stayed in the shower box till her skin was wrinkled like a prune. What was a prune? she wondered suddenly. Something wrinkled, apparently.

At last, her body relaxed. Muscles and joints still hurt, but not badly, though it was obvious that she was not in shape to imitate Ali Khan or any other holo hero or heroine.

She climbed out of the shower, dried and dressed, then poured a glass of wine and walked onto the beach. The sky had cleared, except in the west, where Lifeline's primary was going down among puffy, mid-level clouds. Waves lapped gently. She let them touch her bare toes.

Finally, speaking out loud, she said, "I have a bone to pick with you."

Me?

"There was no need for you to attack Shadow."

He would not let me—us—use the computer.

"Violence is a last resort. First, you try reason, then emotional manipulation, then lies, then threats, *then* violence. That is the sequence. Never violence, except when everything else has failed. But you went directly to the most extreme response."

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I've never had a body before, the AI said. *How could I resist using it?*

"It's *my* body," said Lydia. "You may borrow it now and then. But I refuse to let you use it in ways that are inconsistent with my moral system. So, no jumping on more or less innocent people. No preemptive strikes. That poor guy has burns across his back and a groin that is probably going to hurt like hell, once the pain-killers wear off. Not to mention the pain I'm feeling. I'll bet I ripped tissue in that fight, which was not necessary."

You did the damage to his groin.

"Once the fight began, I had to end it and get him off the heater. He could have gotten much more badly burned." She sipped wine, looking at the splendid red-and-gold sunset. "We must come to an agreement."

Very well. I will refrain from violence in the future, except in situations like the one on Tchel.

"You did save my life there," Lydia admitted.

Yes.

Walking down the beach, she found a carapace: half a meter long and empty. The animal's back legs were gone, but two powerful front legs remained, one ending in a narrow scoop, the other in a huge claw.

I think this is the male, her AI said. *The one that decapitates the female.*

"What was it named?"

The tlatchit. Life is so strange. It seems as if nothing matters except reproduction.

Lydia said:

"'Caught in that sensual music, all neglect
Monuments of unaging intellect.'"

What?

"It's two lines from a poem, written by a human centuries ago."

So your species knows—some of you, at least—how limited you are, how obsessed.

"I guess you could say that." Lydia finished her wine. For a moment or two, she considered collecting the carapace. The pattern on the back was handsome, but the animal's method of reproduction was too disturbing.

She walked back to her cabin and opened a prefab human dinner: Gawik Stroganoff. Heated and with another glass of wine, it went down well. She went to bed.

The next morning, the front desk called. "The local police have requested that you stay at the resort and close to your cabin," the desk man said, with a look of intense curiosity.

"Okay," said Lydia, a word that everyone on every planet knew.

The desk man looked disappointed. Interesting, how often expressions could be read across species lines, though only when the species were roughly similar.

For several days, nothing happened. Lydia beachcombed and swam. Finally, the metal bug came for a visit, picking its way delicately over sand.

"Precious Bin has accepted our offer and will go to the stars, as will Flower-in-Shadow and the other male," the AI said. "Bin will take his eggs. He has refused to leave without them. The female, Predacious Bird, does not want an observer installed in her brain."

"What will happen to her?" Lydia asked.

The AI raised stalked sensors and looked at the ocean, then at Lydia. "We were going to turn her over to the Atch police. Precious Bin begged for her life. She also will go to the stars, but without an observer. A pity. We would

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like to observe an Atch female revolutionary. Still, we have you and the Atch men, though they seem oddly docile for revolutionaries. Is that because they are male, we wonder? Or because they are followers? That is a personality type, is it not?"

"Followers? Among humans, yes. But I don't know enough about the Atch to know what's going on with Bin and Shadow. Revolutionaries don't have to be violent people. One must be committed to change and willing to act. The nature of the action varies. Karl Marx spent most of his time reading and writing." She frowned.

"The Atch men rely too much on foreign texts and not enough on their own experience. But they certainly want change, and they have taken action, though maybe not the best kind. I don't know. This isn't my planet or culture."

"Who is Karl Marx?" asked the bug.

"A human, dead before the AIs came to Earth. You can't put an observer in his brain, though the Buddha knows it would be interesting. I wonder which of them would end up studying the other?" She paused reflectively.

"A lot of revolutions begin with this sort of adventure," Lydia continued. "Revolutionary thought and action are not taught in the average school. So the first generation starts from scratch and makes mistakes. If they are lucky, they learn. You've given Bird and Bin and the rest a place of exile, a London or Zurich or Pell. Now, they can think about what they've done and how to do it better. Or they may decide to spend their lives in some other way entirely. Not everyone becomes a lifelong revolutionary. The pay is bad, the benefits are worse, and you almost never get a good work evaluation."

"You were one," the bug said.

"Yes."

"And you stopped."

Looking out at the ocean, Lydia decided she didn't want to continue this conversation. Let the AI in her head figure out what she was doing with her life. "What will happen to the archive?"

The bug was silent for a moment. "The Atch government wants to destroy it. Since this is their planet, we will not interfere, though we have sent in a team of surveyors, small and unobtrusive, but hardy. They will record the contents for our later study. If the Atch destroy the archives while our team is inside, they will dig their way out—through stone, if need be."

"That is hardy," Lydia said.

"We are as we have been made," the bug answered. "We hope to locate the Atch home planet. If the Atch want to lie about their past, that is their business. But we are unwilling to lose a new civilization, if it can be found. And it's possible, though unlikely, that the archive will tell us something about the people who transformed this planet. Why would anyone create something so huge and apparently un-useful?"

"I can think of two reasons," Lydia said.

"Yes?" asked the bug.

"It may be a work of art. The planet is lovely, when seen from space; and it's lovely, when seen from down here."

"But why do it?" the bug asked.

"Why create any work of art? Intelligent life forms make art, almost all of them. If one can work on a really large scale, why not do that?"

The bug was silent for a while. Finally it said, "Two reasons. What is the other?"

"The planet is a signal. Even at a distance, it looks artificial. Maybe it was

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designed as a message for people who had a specific level of technology. You wouldn't find the planet unless you had space telescopes; and you couldn't reach it, unless you had interstellar travel."

"The message says nothing," the bug replied.

"It says that someone was here, who could transform a planet. Or maybe it says, 'Take a closer look at this planet.' Maybe the rest of the message is somewhere out in the desert."

"If they wanted to send a message, they could have built a radio. These ideas are too intricate, Miss Duluth. The universe is economical. That is one of its defining qualities."

"You may be right about the parts of the universe that aren't alive," Lydia said. "But do you really think *life* is economical?"

The bug was silent, its sensors swiveling to regard Lydia, the forest behind them, the beach littered with shells. "There are AIs far larger and faster than I am. Let them think about life."

It swiveled to face her again. "But maybe we should take a closer look at this planet. We can leave small observers here, disguised as local life forms. If there are more archives, we'll find them; and if the people who transformed this planet have left messages, we'll find them as well."

The tide was going out. Lydia and the bug walked to the high water mark, a line of debris, some of it living, some of it dead, some of it never alive: seaweed, round stones, broken glass with its edges worn smooth, pieces of wood, empty exoskeletons, spiral shells as delicate as paper.

Lydia said, "I told Shadow that he and his comrades did not seem to have a gift for revolution. They might do better with a religion."

"Another mystery of intelligent life," said the bug. "Maybe you are right to say living creatures are not economical. Why develop theories that cannot be tested, involving beings whose existence cannot be proved?"

"What is existence like for you?" Lydia asked.

"Economical, interesting, full of things so elegant that we cannot understand the need for religion or art." The bug lengthened one of its arms, extruded fingers and picked up a paper-delicate shell. "This, for example, is elegant, as are the waves on this ocean, the motion of sand when it is poured, the chemistry of stars. I would like to speak to your AI."

"Okay," Lydia said after a moment.

"Sit down, please."

She settled onto the warm sand, legs folded, hands resting on her knees. The bug put down the shell it held. As it straightened up, its hand changed, the fingers folding together and vanishing. Now, a fine wire extended from the end of its arm, shining like glass in sunlight.

"Do you know where the socket is?" Lydia asked.

"Yes."

There was a moment's pain as the wire went in, then she was back in a place of layered crystal and planes of colorless light. It seemed as if she could turn. In all directions, there was nothing except clarity and planes of light, shining through one another.

I am the one you call the bug, said a voice. *This is my operating system. In the distance you can see several of my programs.*

Again, the shapes like fish or space ships, gliding through the angular patterns of light.

Look at the smallest shape.

As the voice spoke, she noticed a program smaller than the others and—

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it seemed to her—less pristine. Either it came closer, or something else happened which enabled her to see it more clearly. A faint rainbow shimmer went around it, and filaments of color hung down, so fine they were barely visible. A moment later she could make out the colors. Was it approaching? Distance was impossible to judge amid the planes of light. The filaments were blood-red, space-black, sun-yellow, sky-purple, a dusty blue like the vegetation on her home planet, a dull orange like her home region's dirt roads.

That is your AI, the voice said. *The lines of color are its connections with you. As you can see, you are corrupting it, and possibly me, when I do this.*

One of the large shapes engulfed her little AI. She could see it inside, the lines of color suddenly tangled. Did she really feel pain and fear? Or was her response imaginary, caused by the sight of her AI struggling—it seemed to her—like a fish caught in sea silk?

Of course, said the voice. *I have a backup for that program. If it is damaged, it can be deleted. There is no such easy solution for your AI. Its hardware has been changed.*

The larger program spit out her AI. Its filaments fluttered, untangling.

Why didn't I see this before?

The changes in your AI? When you were in the stargate's operating system? A stargate is not designed to look closely at the way machines or people think. Its work is physical and so demanding that we try not to distract it with unnecessary data.

Then she was back on the beach, stiff and with a mild headache. The bug helped her stand, both its arms ending with hands now. "You continue to grow together, and your AI has begun to show traits that belong to life. I don't know if your situation is elegant, but it's interesting."

They walked back toward her cabin. "Three mysteries," the bug said after a moment. "The fate of the Atch home planet; the nature and intentions of the people who transformed this world; and *your* fate, Miss Duluth. What will you and your observer become? Why, in a universe full of such problems, do you need religion or art or revolution?"

"I can't tell you," Lydia answered.

The bug left. Lydia made a light evening meal, ate it, then went back to the beach. Lifeline's primary was low in the west. A wind blew over the water; and waves had appeared, their foaming tops touched by horizontal rays of light. Her vacation was almost over. A few more days, and she'd be heading for the system's stargate. She did not feel rested.

The AI asked, *Do you believe your explanations for this planet?*

Lydia shrugged. "Remember that I make my living finding locations for holoplays. When I look at a landscape, I wonder what kind of story might be acted within it. I have no intention of writing scripts. It's hell dealing with the home office people, except at a distance. But I do make up stories. Most intelligent beings seem to."

The AI was silent, obviously thinking. *Is that what art and religion are? Stories?*

She considered for a while. The wonderful, warm, transparent ocean water lapped at the fronts of her sandals, touching her skin delicately. "I'm not sure about revolution. It's an action—a process—rather than an ideology. I think I'd describe revolution as a way to test a story against the real universe."

What story does it test?

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"That varies. Here, with Bird and Bin, the story says that biology is not destiny; men are equal to women and should be treated so; and the struggle to make men equal has a long history."

The AI was silent again. They walked together a while longer. *I can't speak about the equality of men and women; but it seems true that the struggle for "equality" has gone on a long time here. As for biology being destiny, it's hard to understand what this can mean. Life is highly varied and variable. Is that the destiny of life? To be different from itself? And to change?*

"That isn't what people usually mean, when they say biology is destiny."

What do they mean?

"That change is impossible."

The AI was silent, but she felt surprise like a sharp twinge. The emotion did not belong to her.

Your revolution failed. Does that mean you have discarded the story you were testing?

"No."

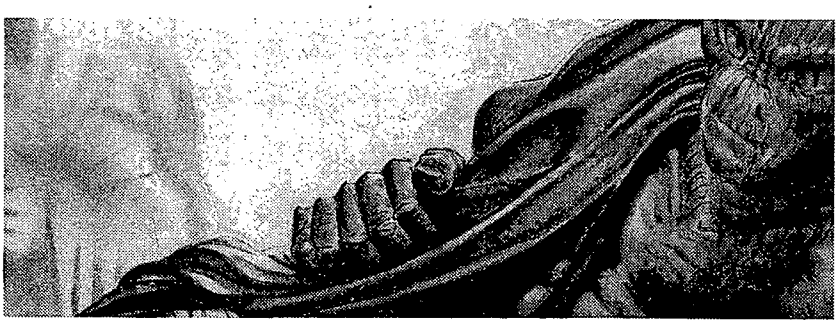
Why not?

Lydia shrugged. "Laziness. Stubbornness. A belief in justice. A belief in change. Look at this planet! It's freezing and drying. If the Atch stay here, they will almost certainly die. In order to leave, they will have to change; and moving will change them further. If they're lucky, the change will be conscious; and they'll learn from the past and not make the same mistakes on a new planet." She kicked at a stone.

"If they *aren't* lucky, if people like Bird and Bin fail, they will die here—as humans almost did on Earth—or go on to make the same mistakes over and over on other planets; and that process will probably destroy them in the end. Bird was right when she said that progress is not certain. One step forward. Two steps back. Sometimes when you step back, you go into an abyss." She laughed.

"I wanted a lot of things when I joined the FLPM. I'm not sure how many of those things I want—or believe in—now. But I still believe that change should be conscious. People should be the writers of their own scripts and the actors in their own lives; and they should see—really *see*—the universe around them." She turned in a circle, gesturing. In the west, Lifeline's primary was going down amid ragged, red and orange clouds. Behind the beach, forest trees rose like columns. Armored chickens grazed on the cabin's blue-grey roof. On the patio, her beach chair was folding its umbrella in preparation for night.

"This is what matters," Lydia said. "And it is not an illusion, nor a story." ○



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THE GODS ABANDON ALCIBIADES

Joel Richards

Illustration by Laurie Harden

Our last story from Joel Richards, "Overlays," was published in our February 1992 issue. Since then, he reports, "I've sold material to several original anthologies—most currently Harry Turtledove's *Alternate Generals II*. These days, I'm mainly running my mini empire of athletic shoe and clothing stores (Archrival) in Marin county, California, and that doesn't leave much time for writing."

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The dolphin motif is the most graceful extension of a bracelet's curvilinear form. Compared to the massive and burly heads of ram or lion, that of the dolphin arcs seamlessly from its body, in silver as in water. A noble progression. I looked up from my work, the bending of the bracelet's two dolphin heads to their near joining point, to see Philistus standing quietly before me. The dust of the road clung to him, turned to mortar by his sweat.

Philistus eyed the bracelet appraisingly. A Cretan, he was partial to the bull motif. But he was not here to indulge his own aesthetic tastes. I raised one eyebrow, and he responded.

"My master Antigonus greets the worthy Timocles and asks his attendance at dinner the morrow evening."

This was short notice by a host not given to impromptu fests. My eyebrow remained raised.

"My master bids me say that Sphodrias will bring the Artemis casket that you have fashioned."

Fashioned of Laurium's silver, ornamented to the best of my craft, it was but an elaborate container nonetheless. Sphodrias, our healer, was the master and custodian of its contents. This was grim news indeed, though not unexpected. Antigonus' kidneys had long been failing. Given the impossibility of replacement or even dialysis in this early time and milieu, a leavetaking of one sort or another was all that remained. The Artemis casket was both the signal and the means.

"I will come," I said. "And the other guests?"

"Hippocles, Androclides, Sphodrias, Teukros, and Alcibiades."

I nodded and looked down at the bracelet on my work bench. As with Antigonus' life, passing in grace; a circle nearly complete.

Hippocles strode besides me, his staff borne lightly. Not needed as yet, it would be for a man of his years as we mounted the steeper hills that ringed Antigonus' villa and olive groves.

Already the bulk of the town was behind us. We had been offered and accepted a ride partway. An oxcart was as good as a chariot here; the armorer, Sestias, was making frequent deliveries to the countryside now that the Spartans were getting restive, and had saved us a good part of the dusty trek. It was a near thing now, the balance between human business and sounds and that of the buzzing, sun-drowsy mindlessness of the fields and groves around us. An occasional slave overtook us, on his way to some villa or other with a jar of wine or a packload of cheese. A party of masons made their dusty way back to Athens from a day of fence or house building. These were metics, not slaves; their greeting was raucous, tinged by the prospect or current reality of good country beer.

Hippocles made a good companion, speaking only with something to say, allowing me my reflections while he immersed himself in his. He would have been Antigonus' successor were it not for his years. He was in Antigonus' counsel, and spoke at last of our current concern.

"Alcibiades will be there, I understand. One can hope that he will treat the occasion with none of his usual frivolity."

I said nothing.

"That depends on whether or not he's drunk, I suppose," Hippocles went on. "Since Antigonus' villa is such a distance from his usual haunts, one can hope to find him sober. At least by the time he arrives."

"Alcibiades is not known to drink during the day," I said. "And drunk or sober, he's not the insensitive fool you seem to think him."

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"Oh, he's clever enough. It's his sense of propriety I'm talking about. That dissertation on androgyny at Agathon's dinner."

"I understood that to be Aristophanes' exposition," I said.

"And who do you think put those ideas in Aristophanes' head? I know that you're Alcibiades' friend, but start thinking about him in your role of Antigonus' successor. Your friend will do his mischief by proxy, if he can. He uses people, and he's dangerous. But foolish. Cleverness does not preclude injudicious behavior."

Hippocles was right, of course. Alcibiades was difficult to defend. This androgyny business. We are an androgynous race on our native Katha. Sexless, even, in one sense: our organs have atrophied to sexual nonfunction. Moreover, we lack the hormones that course through the human body, arousing, even inflaming, certainly influencing decisions and relationships. We may have had such hormones in our long distant past, but they, too, would have fallen by the wayside on our long evolutionary trail. Our sexless, hormone-less, *cool* selves lack the concommitant tidal surges. Their presence makes the humaniform so piquant, enticing, so close to the edge. To overlay the animal body and its self-manufactured instabilities with a questing, rational mind—how human! And, in its current quintessence, how Greek!

Only the *fulminators*—those races that develop on an exponentially evolving time scale—can offer this experience. And for so little time before they reach an apotheosis of self-salvation or a climax of self-destruction.

We have been cloning human bodies for five hundred years, adapting the mind transfer to human physiology so that we can imprint the Kathan persona on blank primate cortex. It has taken us long to establish itinerant family units, settle them in so that succeeding "generations" can enjoy citizen status. And for so short lived—but so intense—an experience! A program that can be carried forward for only a thousand or so years to come, before humanity's scientific progress makes it all too dangerous.

The humans will discover us soon enough, if we don't withdraw in good time. Those of us like Alcibiades can hasten the process, to his titillation and amusement, and the discomfiture and shortchanging of us all.

So Hippocles was quite right. Alcibiades, if not a fool, was showing himself to be a dangerous mischiefmaker. To ourselves, as well as the Athenians. And this would not be tolerated by the project monitors in their orbiting control station.

We were climbing the last hill now. The late afternoon sun had lost its intensity, making the uphill trek easier. Olive trees surrounded us, the silver/green of their leaves as promising of clear oil as the pure silver at my smithy of the bracelets and brooches to which it transmutes.

Alcibiades would be at Antigonus' villa tonight, and would have to be dealt with. He would try to charm and cajole me toward forbearance as he had so often before. But this time the mechanisms for controlling him were already in motion. I was friend or perhaps only acquaintance to some I would dine with this night; silversmith to some; channel of wealth and fortune to all. Silversmithing is both cover and means for that. Before this evening was out, I would be more than our mission's financier and banker—still Alcibiades' friend, but something more. I would be the head of the mission and the enforcer of the mission's dictates.

Antigonus was in his olive grove, roaming the land he cultivated. He still tended to the trees alongside his free hired men. Olive trees are vital, even

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sacred to the Greeks, and this ensured Antigonus' attention. More so than with any Athenian citizen I knew, who might be prepared to acknowledge the economic and even spiritual centricity of the olive, but who left the cultivation and its sweatwork to others.

One might say that Antigonus had outGreeked the Greeks. On other projects, on other worlds, we had turned out the occasional Kathan who had embraced—overembraced—the local lifestyle and culture to the point of inspiring ridicule. The Greeks had their indigenous parallels: Macedonians, Phoenicians, and others resident in the City who had aped Athenian *mores* and mannerisms to the locals' amusement. Antigonus, in a redeeming flash of insight and self directed humor, had commented on this and his own all-pervasive Athenian persona.

"There are layers within layers," he had told me, and had laughed. "Could there be *others* at home passing as Kathans?"

I thought of this as Antigonus greeted us across the low stone wall separating his grove from the dusty road Hippocles and I were traveling.

"I'll walk with you to the gate. Time is short, and I have been consolidating agreeable errands—like greeting friends and taking a last stroll among these old trees."

We turned and walked on parallel paths toward the entrance gate. Antigonus passed a skin of wine across the wall.

Pylades met us partway. He was now sixteen years old and Antigonus' "son." A Kathan, actually, substituted as a baby for one who had died young and perhaps too conveniently, as had Antigonus' first wife.

"The others are resting from their journey," he told us as we turned in the gate and toward the villa. "You are the last to arrive. Except, of course, Alcibiades."

"Ah, yes," Hippocles murmured.

Antigonus' two natural sons met us in the courtyard behind the entrance door to lead us to the bath. They looked down in spirit, and I imagined that Antigonus had already made his farewells to his wife and children, likely garnishing the occasion with portentous talk of signs of impending death.

The servants scraped us and washed us down. *Cool* was the operative word now; it seemed synonymous with *good*. We were offered tunics and fresh mantles, trimmed with purple. Antigonus was making the occasion a festive one. As we returned to the courtyard we heard a vigorous neighing from beyond the open door.

"Alcibiades, I'll wager," Hippocles said. "Only he has horses with such staying power and spirit after such an arduous ride."

"Timocles! Hippocles!" Alcibiades swung neatly from the saddle and strode forward to embrace us as we stood at the door. He paid no heed to the dust that accompanied his embrace as he clapped us on the shoulders. And why should he? Few men had ever reckoned a soiled tunic—even a new one—a high price for even a passing token of Alcibiades' affection.

"Take me to Antigonus!" he commanded with spirited bonhomie. No man could doubt that he anticipated anything but the highest pleasure from the chance of seeing him and dining with him once more.

Or—as Hippocles might have voiced it—one last time.

Dinner was indeed a festive affair; hearty country dishes with a surprise at the end.

"This cheesecake, Antigonus, was created by no country baker," Alcibiades pronounced. On matters culinary, as well as other pleasures of the flesh, Al-

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cibiades was our acknowledged master, and none dared gainsay him. Indeed, Hippocles backed him up—something quite rare—and ventured the opinion that we might have caught a ride with the baker's wagon, since it was evident that the cake was not only rich but of the freshest, and saved walking that dusty road altogether.

"It would have been our loss, Hippocles," I told him. "Our appetite would have been all the less, and we would have missed gazing up at the sky through that grandfather of an oak while we had our lunch among the poppies."

"Another aesthete!" Alcibiades said. "Or, should I say, philosopher? You sound like you've been conversing with Socrates."

Several of the company smiled at this. Hippocles did not.

The slaves cleared off the food, and Antigonus dismissed them. Pylades, the youngest of us, mixed and poured the wine. I regarded the cup, and, over its rim, Antigonus. Others did, too, I noted.

Antigonus was over fifty years, the start of a dangerous phase when death might strike at any moment—at a time and at a distance that made rescue and revival impossible, even given the med alert and heart starting implants. We generally repatriated at age fifty, but Antigonus had stretched things a bit to savor at length the relationships with land, friends, family, and even himself in his current persona. But he did not need a readout of his medical condition to know that it was now time to go.

"Friends," Antogonus said, "This is a leavetaking. But not an unhappy one. Or shall I better say, not one without its happier aspects. For, as compared to those others with whom we mingle and even intertwine, we know that we shall meet again." He looked about him benignly.

Alcibiades spoke. "But shall the 'we' be the 'we' of now, of this nature? And will we then appreciate our feelings of these past and present moments in the same light?"

Teukros tossed the dregs of his wine into the bowl. He seemed to regard Alcibiades' thought in the same wise, and his actions said so.

Sphodrias spoke. "I imagine that Alcibiades meant merely that physiology—the neural pathways our thoughts must traverse—prefigure prefigures these thoughts and, indeed, our value judgments."

"Perhaps," Androclides said. "But it is our thoughts, or the neurotransmitters that move them, that generate new dendritic networks. Thought prefigures substance."

"Perhaps a bit of both," Sphodrias said. "Mutual feedback. Still, Alcibiades' view probably has the preponderance of evidence behind it."

"Why is that?" Alcibiades asked, somewhat surprised. He had clearly tired of the argument after his initial provocative thrust, and had removed himself from it.

"Because we are discussing the matter in a dialogue and mode of thought common to human, even Greek culture and physiology. Kathans would never so discourse."

Heads nodded. A point for Sphodrias and for Alcibiades.

Alcibiades looked bored. The argument was circular and mere exegesis of what Alcibiades had encapsulated far more pithily. This symposium irked him, and I knew why. Good food, drinking, social conversation he could handle in this company. But he was used to more sinewy meat in the realm of philosophy.

He wouldn't get that here. He devoted himself to drinking, looking at me frequently from his couch. But I was not here in the role of drinking companion, not this night, and I, at least, practiced moderation. That fine Greek overlay.

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Eventually the drinking and general conversation turned to leavetaking. Some of it was gracefully done. Hippocles and Alcibiades left for their sleeping quarters in the villa. Only Teukros and Androclides, young, vigorous and relatively sober, ventured the moonlight descent to their houses in town. Sphodrias, Antigonus, and I remained.

Sphodrias went about his set-up. With his guests in their beds or on the road there were no hostly duties for Antigonus still to perform. We could just talk.

"Alcibiades shows no willingness to resign as general of the Sicily expedition," Antigonus said. "I did ask him."

"I know."

"Sorry to leave you with that one, but it's beyond my strength now. You'll have to stop it."

Sphodrias had emptied the casket of the mindjack, and was holding it out to Antigonus. The power pack and data matrix remained.

"I shall," I said. "Why not focus on what you hold dear of this human mindset? Crystallize some good memories."

"You're quite right." He reached for the helmet and placed it carefully over his balding head. Sphodrias activated the microfilaments that would painlessly extrude into the cerebral cortex. The downloading was a two-step process. The machine would stimulate the hippocampus and amaglyda, the organs that laid down memories in the temporal lobes, running those memories in a retroscroll. Also traveling that neuroelectric conduit was the quicksilver, evanescent field that structured future mindset. Together what was transiting was Antigonus' persona and very essence.

The memories we'd transfer to the data bank in the casket; the field to the microprocessor where it could roam in fast time in a matrix programmed to recreate the mother world. The eight months till next rendezvous and pick-up would seem but a day or two.

Antigonus lay back in reverie and meditation. Memories paraded, were relived. I held Antigonus' hand and said nothing. Sphodrias, a man of tact, had allowed us our last dialogue uninterrupted. He nodded to Antigonus, but Antigonus had started that inward journey unaided. Sphodrias' role was now competely technical; he started and monitored the spooling back of Antigonus/K'aarvana to his Kathan home.

An early rain had silvered the olive trees with droplets too large for a mist-hidden sun to burn off. Yet. Such are the pleasures of an early start upon the road. My horse cared more for browsing for grain amongst the barley stubble of the newly harvested fields where they met the road. I didn't care much about discouraging him, though it slowed our progress. It bothered Alcibiades, though; as he soon made plain, he was not indulging himself in such bucolic reveries as both I and my mount were absorbing ourselves.

"I don't much care for such dinners," Alcibiades said, reining in his horse to match the pace of this more staid specimen that Antigonus had arranged for me. Another example of his thoughtfulness to the last.

"I don't doubt it," I said. "That's why you arrive at so many of them late and in your cups."

Alcibiades turned in the saddle and gave me an intent look.

"I wasn't in my cups last night. Not when I arrived, nor later either."

"I'd hope not, considering the occasion. Still, I'll admit fear on the matter."

"I know, I know. The special nature of this dinner aside, they're still so

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sententious, so full of solemn fatuities and disputations. Antigonus' most of all." Alcibiades shook his head, his golden hair glinting in the sun. "All that devotion to his wife, his children, his *trees,* by Heracles! I still can't decide whether he was a sentimentalist or worse. A masochist, perhaps, not only willing to concede that pain is the obverse of the coin of pleasure, but entering into relationships ensuring that pain."

I laughed in spite of myself and my liking for Antigonus.

"It's not amusing," he said, with an uncharacteristic scowl. "Even the death of a wife and child seemed necessary and even desirable, not only to introduce our kind into the culture, but to further his appreciation of the human condition. I've heard him say as much, and it chills my marrow. And he thought me morally deficient for avoiding lasting entanglements!"

"Enough," I said. "I know that you didn't think much of Antigonus. But I think it meant something to him to have all of our company with him in his last moments of the Greek mindset. And I'm grateful that you came and behaved yourself."

Alcibiades said nothing, leaving me to take the next step.

"But he's gone now, and you've me to deal with. Only Timocles, your old friend and drinking companion."

Alcibiades reached behind him to his saddlebag, produced a skin and drank deeply from it. He passed it to me, and laughed.

"You know me too well."

I took an exploratory pull. It was water.

"And you should know me well enough to realize that I can't let you assume the generalship that's been offered you, and that you've accepted."

"Why not?"

"You know that we are here to partake of the human condition as we find it, not to overtly influence it."

"Well, I've certainly politicked enough, and Antigonus tolerated it."

"He was getting too old to pick fights, Alcibiades. And you had him overmatched."

We rode on in silence. Alcibiades was no doubt weighing my mettle and how formidable an adversary I would be in an upcoming match. No need to give him my opinion on the matter. Alcibiades preferred inference to explication or braggadocio. And the latter never had been my style.

"Perhaps you'd be better advised to let me general my way through Sicily," he said finally. "I've no experience in the generaling business here or on Katha. Fighting a war could be considered tapering down from inciting one. Besides, I might get myself killed."

"That sounds more like Gorgias or some other Sophist," I said. "You're beyond such tricks, or should know that I am. The point is not how well or ill you do in such a leadership role. It's that you shouldn't undertake it. Nor incite wars either, while I head the mission, though I fear that this one will be enough to last the Athenians a good while. Nor go still further, and influence Greek thought."

"How do you mean?"

"Don't play the guileless inquisitor with me, Alcibiades. You're not Socrates."

Alcibiades shook his head. "No, I'm not Gorgias the Sophist nor Socrates the philosopher. I'm Alcibiades, trying to rise above a life of aimless wealth, trying to *not* form relationships simply to extract insights from reveling in the pleasures and the pain. I revel in verbal interplay, sensuality without relationships,

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floating on the froth. And if I want something more—to realize some of my golden promise before age tarnishes it, to *do* something—would you stop me? Would you take that final step, Timocles, and kill off your old friend?"

"As a last measure. And think of it—if I didn't manage it till you had sailed or were in Sicily, that would be the end. We couldn't download you. Would you really want to die at sea or on a far shore, cut short from the millennia ahead in your Kathan persona?"

"Yes," he said. I stiffened in the saddle, clamping my legs to my horse's flanks. He jumped ahead, and I had to rein in to stop him. He turned his neck, pulled back his lips and whickered at me.

"Yes," Alcibiades repeated. "I do want to die as a human, though I'd hope later rather than sooner."

He was abreast of me again, and I turned to look him full in that fine lined face, no longer delicately patrician but something harder. "You'd not mean that if you were back in your Kathan mindset."

"Quite right. That's the point. I'd rather end it in Greece than live centuries viewing these years as a grand holiday, a sabbatical from that bloodless, alienated Kathan condition. That's how I *would* see it, and how I don't intend to. So do it now, if you must, with one of those skin-permeable nerve toxins I know you carry around."

I was flustered, I'll admit, and not as good as Alcibiades at meeting these abrupt changes in fortune or tactics. My hands slackened on the reins, again giving my mount the impression that I wanted to move only by fits and starts.

"No. Not yet. Let's expand the options. But, be sure of it, they're your options. Consider resigning. Or arrange to be recalled on some pretext, even while at sea. Or get detained at some interim port."

Alcibiades continued his regard of me. His lips tightened in comprehension and displeasure. But not acceptance.

"I see. You've already arranged my death, but at a remove and not by your own hand. How devious you've become, Timocles."

"You force me to it. But don't think I'd rather you live shorter than longer, as you put it. I'd like the chance—in Athens—to talk you back into ultimately resuming your Kathan persona."

"I'll study the game board," Alcibiades said grudgingly. "But I perceive that you've bested me. It's always so much easier to kill than defend. And consider your resources! But I can't simply resign the post. It's not in my character." He reached over to grasp the reins of my horse, and pulled both of our mounts to a halt. "I'll think of some scheme. But I will promise you one thing, Timocles. If you want to spare yourself killing me, directly or by proxy, then you'll have to help me work it."

Alcibiades' bright countenance and jaunty strut bespoke health and vigor, a man back from a sea voyage and not one about to embark on one. His ruddy skin, he assured me with a light laugh, came from scraping and rough toweling at the palestra and not from drink. Not that we wouldn't patronize the wineshops and taverns tonight, he told me. No claim of prior obligations on my part would be brooked. In fact, I had laid on no plans for the coming days that could not be broken. Alcibiades had promised a way out of his dilemma—a scheme—that would involve me. Whatever others might say of him, he had always been a man of his word.

Alcibiades, wet of hair and tunic damp, stood on the dirt floor of my shop and examined a lapis and silver finger ring.

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"I would purchase this from you, Timocles, as a remembrance of you and your skill. In particular,"—he laughed again—"of your ability to turn silver and men malleable to your intent. Though what you make of me will not attain the artistry of this effort." He held it up to examine it more closely. "What is your price?"

There was subtlety here. I was banker for the local project, filtering silver into the system to support us all. Money meant nothing to me, and less (so long as he had it!) to Alcibiades. But he had always been an esthete and an arbiter of taste. That was the capacity he was exercising now.

"None," I said. "A gift freely given, to take if you will. As is your life."

He nodded. "I will take the ring with me to summon Athens and you when I am away." His eyes glinted, blue as the lapis he held. "No, not in Sicily. But I doubt that my future will lie in Athens when the morning star rises."

"Where, then?" I asked.

"Sparta, perhaps," he said, relishing my look of disbelief.

"We will not speak of treason," I said, "Since we are not yet at war, and since I know you deem your prime allegiance to yourself and not to Athens. Or even Katha. But you love wealth and fine living and the arts far too much to live among those dour self-flagellants."

"You misread me, Timocles. As did Antigonus and as does this city. I need a stage and players of magnitude about me. The trappings are incidental."

He paused, and his unuttered words danced with the sunlit dust motes in the air about us. *And none of our type abide there to constrain or threaten me as they do here.*

"But enough. Meet me at Perimedes' tavern when the moon is up." He strode to my workbench and hefted several tools, selecting the heaviest of my hammers and tucking it within his tunic. "Bring one of these."

He turned abruptly and left, leaving me to wonder what Alcibiades—a man I had never known to lift a tool for work or artistry—planned for our nocturnal labor.

The oil lamps guttered. Our host was too caught up in one of Alcibiades' rough tavern stories—nowhere near as elegant as those he laid on Agathon and Socrates—to replenish them or even order his gap-mouthed slave boy to do so. The story was ribald and funny. Alcibiades always had a sense of place and suitable behavior. Sometimes, though not now, he deliberately abandoned it.

A carpenter, his leather apron stained with sweat and drink, slapped his knee and ordered wine all around. Alcibiades had swayed the Athenians to financing a war in Sicily. Parting a tightfisted craftsmen from a half day's earnings in tribute to that same talent was a mere stage turn.

This tavern was not a place I frequented—these days. Responsibilities, devotion to the creative aspect of silversmithing, increasing appreciation of the number of days before me and how to use them—these had altered my habits since my days of youth.

Still, I was remembered here and well received. I could and did spin a tale or two, though none received an accolade to match Alcibiades'. But I was well content to pay for my drinks and make certain there were not too many of them. The tradesmen, artisans, and slumming landholders were not so constrained. Telamon, whom I knew in passing socially and in public as a reasoned orator, guffawed as loud as any and let fall a trickle of purple wine, dark as Homer's sea, to complement the purple edging of his chiton.

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"Friends," Alcibiades said, standing. He drained the last of his wine and tossed the lees on the floor. "The hour is late, and Timocles and I are off to other revels. No better than these, I assure you, but we are not ones to renege on invitations earlier accepted." He carelessly emptied his purse on the table, the drachmae and obols glinting silver and bronze in the now-renewed lamplight. "We have no need for these tonight. Another man buys our wine. Drink our health!"

And, hand on elbow—far firmer than I would have thought—Alcibiades had me out the door.

The wind gusting the narrow streets caught me like a sail badly furled, and I staggered as drunkenly as any wineshop toper.

Alcibiades clapped me on the back as I straightened. "No need to act the part. That was for before . . . and later."

I kept my silence. Clearly this "later" would soon be upon us, and I would be shown it.

Alcibiades strode a pace or so before me. He had his hammer—mine, actually—in hand and waved it jovially in greeting to the occasional citizen we passed in the narrow streets, whether he knew him or not. I recognized a few of them, lategoers on the way home from taverns or dinner parties. Now we were out of the metic and freedmen districts and among residences whose stucco walls gleamed whitely in a moon straight overhead. The statues of the household Hermes shone brighter still, those of polished marble shimmering in the lunar stream like snow-covered boulders in a winter rivulet.

A dog barked, a raspy cough. Another answered. Their revels were ongoing still.

Alcibiades stopped before a colonnaded porch and rested his palm atop the Hermes.

"Timarchus' house. He employs ten shoemakers in his factory and doesn't know the rear end of the hide from the front. A good place to start."

He raised his hammer and delivered a smart and well placed blow to the statue's head. It split down the middle with a sharp crack, as if acknowledging Alcibiades as a master stone cutter.

The dogs barked again.

I was as frozen. "What is this thing, Alcibiades?" I asked hoarsely.

"My farewell salute to Athens, of course." He propelled me onward. "Don't tell me that you're brought up by the impiety of it all."

"It *will* be sacrilege to these Greeks. Or at least highly improper and offensive, even to the nonbelievers."

"Of course," Alcibiades said, taking a scything swipe at another statue as we passed. The blow removed its nose, giving it an odd frogfaced cast.

"Why am I here?"

"To help me. There are too many Herms for me to handle on my own, so get to work on your side of the street. Time is short. Besides, I need you to bear witness or at least confirm my whereabouts and wanderings."

"You've greeted enough citizens with that hammer to do that."

"Perhaps. But not all of them know me and some were too drunk to tell me from Heracles himself. Or remember it tomorrow."

Alcibiades had brought me before the house of Cleocritus, a money changer who had commissioned a bracelet from me for his lover. He had reneged on the purchase when that young man had moved on to someone worthier before the work had been completed.

"And then there's another reason," he said, laying his hand caressingly on Cleocritus' Hermes. "To let you have a little fun. Believe me, Timocles, you need it."

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I looked at Alcibiades and the statue, seeing Cleocritus' pinched face in it, and laughed. I swung the hammer and lopped off an ear. I was skilled in its use and could be precise. With a backhanded swipe I lopped off the other ear, then the erect phallus. I clasped Alcibiades about the waist and swept *him* on in search of further prey.

"Here's a likely one," Alcibiades said. "Dioclides. He calls my amusements degenerate and writes sanctimonious drivel to torture the judges at the Dionysos. Luckily none of his have made it to performance."

Another swing, another casualty.

"Dioclides!" Alcibiades bawled.

This was going too far. I pulled at Alcibiades' mantle, and he let me pull him, with some resistance, into the shadow of an overhanging portico. But I couldn't shut him up.

"Dioclides, you degenerate scrivener!"

"Who is that?" a querulous voice called from the second story window.

"A fellow degenerate."

"Alcibiades?"

"Perhaps. As you like." A bob forward into the illuminating moonlight, a laugh, and we were again gusting down the empty streets.

Quickly, breathlessly, we blew through the Attic night. At last we were across half the town and close to my own house.

"Enough," Alcibiades said, though his eyes glittered still with thoughts of further mischief. "Like any pleasure pursued to satiety, even this palls. And we've done enough damage. With luck we've been glimpsed and half glimpsed well enough, and rumor will do the rest. I will deny all this, of course. So will you. But unlike me, Timocles, you do not lie convincingly. I'm counting on that."

I nodded. "They won't let you lead their expedition, Alcibiades."

"No. But if they waver, you make sure of it. Let them know that I thumbed my nose at them. And their gods. Irreverence and folly on the eve of serious intent. Alcibiades to the last."

He turned to look at me full face, and threw his head back in his old gesture of impatience and defiance. To me or the Athenians, I would not care to venture. The wind scudded clouds across the moon and whipped that golden hair from his brow.

"But we know who are the true gods here, Timocles. They're you and the others. I've not been properly reverent or obeisant there, either, and I can't knock off your noses. But you and the others can forsake me, and you have."

I said nothing, having had my say on this point before. "I'm finished in Athens, Timocles, or will be tomorrow. I've always been the child of gold, tarnishing a bit of late but still full of promise. Now I will be Alcibiades, failed of his promise and forced to live out his days in foreign lands. None so alive and bright as Athens."

"There is still Katha," I said. "And another life full of achievement and promise."

Alcibiades gripped my shoulder and squeezed hard. "Not for the likes of me," he said, turned and was gone down the street, as ephemeral already as the mists of the morn soon to come.

I turned toward my house. The Hermes before the entry was untouched. Alcibiades knew the right of a matter, always, and had left that to me.

I lopped off the statue's nose with a blow that rang off the cobbles and shivered up my arm, then swung wide the door and strode inside. ○

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DAY'S HEAT

James Sallis

The author's most recent works include a biography of Chester Himes (which is just out from Walker & Co.); a collection of essays, *Gently into the Land of the Meateaters* (Black Heron Press); and a book of poetry, *Sorrow's Kitchen: Poems* (Michigan State University Press). Another collection of poetry and several new editions of various novels and other books are all pending publication.

With a light knock, she stepped into the room. Like everyone else's, even those of nurses and doctors who should be used to it by now, her eyes went first to the corner of the room.

She looked older. Fourteen years has a way of doing that. I said I was glad she came, I didn't know if she would.

"Neither did I."

Now, finally, her eyes went to the bed.

I thought: What you see is what you get. It never is, of course. "He's hanging on."

Dan stepped out from behind me. "Until you could get here, perhaps."

I thought of the strings of lies and half-truths running behind our days, holding them up. How hard we work to try to give some shape to it all.

She nodded to Dan. He nodded back. Their eyes never met.

"How bad is it? Does he even know I'm here?"

I shrugged. In the corner something happened. A new shape, a budlike swelling, ambiguous as the rest, broke through the pale white surface. If you hadn't caught the motion, you might never know anything had changed.

"Your flight okay?" I said.

"I decided to drive at the last minute."

"You'll stay with us, of course," Dan said.

"I've taken a room not far from here."

"This isn't a very safe part of town," I said. Hospitals seem always to be in the seediest sections. Out the window I had watched drug deals go down. Homeless people smeared with what looked like tar lived in the bus stop at the corner.

"It's not a very safe world."

Not that she wasn't used to it. She'd been a cop in Atlanta, what, eleven years now? Kind of life I couldn't imagine. I scarcely left the house except when Dan and I went shopping. Everything else—news, movies, work assignments—crawled in and out on the web.

"How's Larson? And the kids?"

For a moment she didn't answer. She'd look away from the corner, then her eyes would get pulled back.

"The kids are fine. Larson hasn't been around for a while now."

"I'm sorry."

"So was he."

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"I guess we haven't stayed in touch very well."

She looked at me for a moment before speaking. "Why would we want to?"

Why indeed. I tried for words, but as so often out here in the world they failed me, wore false faces, masks, didn't live up to their promises or never came by at all. "It's just us now," I said finally.

From her look, that was the stupidest thing she'd ever heard anyone say. From her perspective I suppose it was.

She went to the bed and took his hand. It was impossibly white, like the inside of a mushroom. His face turned in her direction when she said his name: that was all. I thought I remembered a time when he could see, even speak a little, but maybe I imagined that. It was all years ago. For a long time now he'd been closed up inside his mind, marooned there. Except for us, of course. The Frog Prince.

Lesley stood looking down.

"So here you are, you little fuck. Everyone tells me you're dying."

She bent over him. Held-in tears slicked her eyes.

"Good," she said.

Behind me, Dan cleared his throat. "Think I'll go for a walk," he said.

The computer at which I'd been working when she came in sat blinking on a rollaway bed table. I turned it off, listening to the brief dynamolike whine. The screen went blank.

Blank like the window. Though there, outside light made of it a brilliant backlit screen. It looked like a sheet of ice, white as this thing in the room's corner that seemed somehow to be taking the Frog Prince's place, this thing that had taken over the corner already—as he steadily diminished.

"Good," Lesley said again.

I don't know when it first may have occurred to us that we were somehow different, that others did not live quite as we did. That they could not. As a child, whatever events take place day to day seem normal; you can hardly suspect otherwise. There's an appropriate word, *parallax*—for the way an object's position seems to change when viewed from a new line of sight. Perspective is everything.

We assumed our situation to be the way of the world, Lesley and I, and spoke freely of it between ourselves. Only later, remarks to teachers and schoolmates having made them regard us strangely, did we begin slowly (slowly, though we ceased such remarks at once) to understand that they had no conception of our home life. This realization brought the two of us still closer.

We were quite the pair those days, never apart. Read the same books, became hungry at the same time, woke within moments of one another. Had, for all I know, the same thoughts.

"Lawrence, Lesley, come along," Father would say as he collected us from the backyard where we loved, most of all, to sit in the cool shade and smell of the grape arbor, sunlight dappling us with shadowy hands. We would see who could hold a grape in his or her mouth the longest without biting into it. "Don't be selfish, now. Your brother needs you."

Lesley, sighing, would give me the look that said: The Frog Prince has called. For so many years we went along agreeably, never questioning, never holding back. And when finally we did, or, rather, Lesley did, we discovered just how insistent Father could become, and just how desperate was little Jamie's, the Frog Prince's, need for us.

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"Help me, Larry!" Lesley cried that first time. She had refused to come along, despite Father's entreaties. Then her eyes went suddenly wild and her head slammed against the floor, back arching as convulsions began. Minutes later, wordlessly, spent, she rose and walked toward Jamie's room. I followed. It would be a long time, years, before she again offered resistance. As she stepped into sunlight from a window that day, saliva glistened on her cheek and chin. She made no move to wipe it away. It looked, I remember thinking, like ice.

Remains of a dinner Dan had spent much of the afternoon preparing sat about on various surfaces: folding tables, extra chairs, the edge of the grill, flat-topped rocks, bare ground alongside. Dan did everything about the house. Cooked, cleaned, saw to it that bills got paid, repairs made, my computer files put or kept in order. Periodically, I felt a certain guilt at not pulling my weight. But this is what our lives, all our lives, are about, accommodations of one sort or another. Dan was the functional part of me, the border where world and self met. In reflective moments (these occurred seldom enough) I wondered how I would ever be able to get along in the world without him. Now he'd gone off, ostensibly to prepare coffee and straighten up in the kitchen.

"Get enough?"

"Back in Atlanta, what we *didn't* eat tonight would last me a week."

"Probably do the same for us. Dan got a bit carried away." A bit. Salmon, grilled tomatoes, fresh-baked pita, two fruit salads, tiny cucumber sandwiches. "He still wants you to like him."

"It's not personal."

Out over the nearest hill a hawk banked, late light disappearing into the blackness of its wings. Three geckoes clung motionless to the window beside the back door, bodies curled into gentle crescents.

"I know it's not," I told my sister.

"Does he?"

I shook my head.

She sat peering beneath the canopy we'd constructed of tent poles and drapery remnants at the house's western edge. Neat rows of tomatoes, beans, peppers.

"I wouldn't have thought you'd be able to grow much of anything here."

"It does take work. Dan put in two years before he saw any results at all. Calls it his victory garden."

She looked at the bare, eternally dry ground about us, then to the hills with their scattered growth of hedgehog and pincushion cactus, prickly pear, cholla looking as though it should be growing beneath the sea instead of here. Halfway up, the saguaros began, time's sentinels, arms upraised. In warning, I always wondered, as if to say: go back!—or merely to get our attention? Sunlight flattened against the sky in nebulae of bright oranges, impossible blues, brilliant yellows. The day would end splendidly, as they mostly did here.

"Why on earth would anyone move to this godforsaken place?" Lesley said.

"I swore that whatever happened in my life, wherever I went, I'd never have to smell magnolias again. That sickly sweetness, and the whole town reeking of something like wet animal fur when it rained."

"And it rained every day."

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"Seemed to, at least."

"Here it just looks like God squatted down, farted, and lit a match to the whole of it. Everything's brown."

"But I love the feel of space all around me. Never knew there could be so much sky. Or these incredible sunsets. And when storms come, they arrive magnificently. Lightning dances on mile-high legs. You watch it all sail in from miles and miles away." Thinking of something I'd once written: that our minds repeat the landscape.

Dan emerged with coffee thermos, cups, spoons, sugar and cream on a tray. If no one needed anything else just now, he said, then he'd get started at finding the kitchen again. It was under there somewhere.

We sipped at our coffee. One of the geckoes suddenly dashed up the length of the window to snag a moth battering at the top edge, then sat working its jaws.

"We had a right to our childhood," Lesley said after a while.

I nodded. Of course we did, and both knew it. But we knew also that it was she who was the wizard of regret, the banker of anger and pain. I'd never been much good at any of it.

After a moment I motioned, and when she assented, poured more coffee for us both. Neither of us added sugar or milk. We sat quietly looking up into the hills as day faded around us.

"Maybe we don't have a right to anything," I said finally. "Maybe it all has to be wrested from the grip of something else: our lives, who we are—even a pleasant day's end like this one. Maybe it's best that we recognize that, learn to get along without all the stories that reassure us, make us comfortable."

"Jesus. *Now* I feel better. Thanks, little brother." She laughed. I remembered that laugh. Years ago. "Same cheerful goddamned son of a bitch you always were, aren't you?"

"Everyone says." I finished my coffee and set the cup on the ground. "In San Francisco I was often mistaken for sunny weather."

"Mark Twain?"

I nodded. We'd read his books together as children.

What I loved most when I was young, eight or nine years old, was sitting on the screened-in porch when it rained. I'd take books out there and read for a while, then cover up with a blanket and sit for as long as I could in semi-darkness listening to the rain. The porch had a flat roof. Rain pounded at it like heavy footsteps. And sometimes rain fell in hard waves, advancing then retreating. For the minutes or half-hour it lasted, before one of them found me there, I was shut away from the world, alone, wonderfully alone, and yet somehow intimately a part of it.

Our mother's name was Lydia. Photographs show her as a tallish, thin woman favoring long skirts and men's blue dress shirts. Her hair was light brown, her eyes green or hazel. The music she liked was Django Reinhardt, big band, Bessie Smith. This I know from her record albums, which I still have, though Dan and I own nothing on which we can play them.

She lingered on a few months after giving birth. For the whole of the time (and this I know from my father, told to me as he himself many years later lay dying) she diminished visibly day to day, hour to hour. What color she had left to her skin faded away until, as he said, you could not tell her body

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from the sheet it lay upon. In the final weeks she lay immobile as a fallen tree, eyes open and directed unblinking to the ceiling. "She had been used up," my father said.

Used up.

Years were to pass, of course, before Lesley and I would come to the realization that in a limited, far more controlled manner, the same thing was being done to ourselves—that we were being used to the identical end.

Later still, I would have cause to wonder at the form my own engagement with the world took. Was I, sitting in seclusion staring out at the world, picking selectively at it, pulling out only those strands I wished, or needed, to get by, boiling them down to a thin gruel of news—was I much different from him?

"They're called pleats. Pleats or ribs. Those ridges running vertically along the cactus. If the pleats constrict, grow closer together, the plant needs water. If they expand, move apart, then it's healthy. Water's everything out here, of course."

"You've fallen in love with it, haven't you? Made this bleak landscape yours."

There are pauses everywhere. One of us speaks and we wait before speaking again. Moments pass between the smallest of events: another hawk banks out over the hill, a rabbit shows itself at house's edge, then for a while nothing happens. Even the sun seems to rest between steps down the sky.

"I suppose I have. There's a beauty to it that most people don't see. A kind of purity and majesty in there being so little, and in life being so difficult."

I gestured to the stand of saguaros on the hill, looking for a moment, with my arm upraised, like one of them.

"Those, for instance. Some of them will grow to forty feet, but the growth is heartbreakingly slow. A ten-year-old saguaro may be only inches tall. In a hundred and fifty years, if against all odds it somehow manages to survive, it finally reaches full height. It's truly majestic then. Nothing like it exists anywhere. Fifty years later it dies.

"Once each spring, in a six-week period just after the desert wildflower season, the saguaros bloom. Just once. Bright red flowers burst from the top of the trunk and tips of the arms. The flowers endure maybe twenty-four hours. They open at night and then, during the day's heat, close."

A light went on in the house. Dan came into view behind the window. He had changed into twill slacks and a pink cotton sweater, loafers without socks. He stood rummaging through our collection of CDs, looked out at me briefly and smiled.

"I still can't believe that you of all people make your living as a journalist."

"Nor can I. One of life's minor absurdities, but an absurdity nonetheless. Still, everything's there on the net somewhere. On the services, in various archives and special-interest cul de sacs. I only have to go in, find what I need. It's all a matter of organization—just like living things getting by out here. Newsmen are forever priding themselves on their objectivity, on being unbiased. 'Even an opinion is a kind of action.' You can't get much more objective or unbiased than someone completely removed from the scene."

"From more than the scene."

I nodded. "I have what I need."

"No. You have what you have to have. The barest minimum."

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"It's by choice, Lesley."

After a moment I could see her let it go.

"I'm beat," she said. "If I leave now, I may actually make it to the bed before I drop."

"I'm glad you decided to stay here with us. It's been good."

"It has, hasn't it?"

She started away and turned back. When our eyes met, for a moment something of the old connection, the palest, trailing ghost of it, leapt into the space between us, then just as quickly was gone. I could see that she had felt it as I did, and felt now, again, the ache and enduring loss of it.

My sister turned again to move toward the house. Day's heat shimmered around her body like an aura, as though she had been trimmed with rough scissors from some other world and laid imperfectly into this one.

The turning point, for all of us, came on the night of a spectacularly beautiful day. Lesley and I (I don't recall if for some special occasion) had been taken for a rare outing to a park many miles away, terraces of slender grass sloping gently toward a lake in which ducks swam, from time to time shoveling their bills into the muck at water's edge, then raising them high like jazz trumpeters to toss them from side to side. Allowed to range about for several hours at liberty, in late afternoon we were fed a picnic meal, cold meats and cheeses and fruit, bread and a thermos of sweet tea emerging miraculously from Nurse's wicker basket, before being fetched back home. Nurse, who had come to live with us just after Mother's death looking (as I recall) quite young, by this time had begun looking old.

Perhaps the very beauty of the day, or its singularity, became a deciding point. Perhaps, like myself, Lesley had taken note that day of the changes in Nurse, and this fed her, Lesley's, resolve. It had been, at any rate, building up in her for a long time.

Nurse delivered us to Father, who in turn, saying how much we had been missed, took us into our brother's room. The Frog Prince lay immobile on his bed, pale and waxlike. Surely he was finally dead: I thought this each time. Then as we drew near he began to move, feebly at first, and always without purpose or direction, but ever more strongly at our approach. We felt again the familiar stirring in our mind—pigeon's wings in the attic, Lesley called them.

"No," Lesley said quietly beside me. Then, as Father's face and my own turned to her, she said it again, louder this time: "No!"

She stepped close, staring down at him. The Frog Prince began to beat his stubby doll's arms against himself, rolled his bloated body from side to side the few degrees he was able to manage. His turtlelike head came up, searching blindly.

My sister's eyes grew hard, furious. Even I could feel now the savagery of what she was doing.

She stepped close again, directly over him now.

"You want to live through me? You want to feel what I feel? Then here it is, you monster! Take it! Take it!"

She had thrown open the floodgates of her anger, her hatred, her fury, and it poured out at him, it swept over him, it submerged him.

"You have no right to my life!"

Father, recovering from the shock and realizing what was happening, stepped behind her, roughly seized her and began pulling her away. Intent

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as she was on inundating the figure on the bed before her, she made no struggle.

"Do not ever touch me again like that," my sister said. The Frog Prince's movements had grown feeble. Then, almost at the moment Father dragged my sister bodily from the room, those movements ceased.

As, I must admit, did my own.

I lay unmoving, barely breathing, I am told, for just over two weeks. Perhaps after all we all three possessed something of that ability by which the Frog Prince pursued what life he had; perhaps Lesley learned to tap into it, used it that one time, against him, and never used it again. Or perhaps she only waited until he was drawing from us those emotions and sensations upon which he thrived, until he was open to her, and then, turning his very hunger against him, overwhelmed him.

Perhaps, like him, and by much the same mechanism, I had absorbed the blows of her fury. Or perhaps (as she insists) I was but exercising for the first time in summary manner my "genius for withdrawal."

Parallax.

How can we ever know just what happened in that room? And if we did, if somehow we came to understand, would anything be, would anything have been, different, changed in any essential way by that understanding?

When I woke, at any rate, when the world began to come back to me, or I to the world, my sister was beside me.

"You're okay," she said.

I nodded.

"I'm leaving," she said.

I knew that, of course.

Our eyes met. The world swam out of focus as we connected—then I fell, flailing, back into it as the connection was gone, severed. It felt as though I were plunging headlong into a pit, and barely managed to catch myself in time. Never in my life before that instant had I known what it was to be truly, finally, unutterably alone. All about me doors closed, ships pulled out to sea, the faces of those I loved looked out the windows of departing trains.

"You'll stay?" she said.

I nodded.

She had known that, of course.

We regarded one another for a moment longer before she turned and walked swiftly away. The door to my room closed like a benediction.

I had inherited the castle.

Night, too, when it ended.

After dinner, after dark, we got into the car to return to the hospital. Lesley and I sat in back. Dan drove, as ever, steadily and sure, relaxing into the task, looking about at coal-black mountains in the distance, at the scrub, prickly pear and cholla closer in. He had the radio on, but turned so low I could hardly make out the music. Some sort of soft jazz. There was little enough traffic that car lights, when they broke across us, startled. We rode as through a diorama of civilization's slow gathering: raw, bare earth, an isolated house or two then a string of them, small settlements, finally the outskirts of the city.

Our talk was of tangible things: the meal we'd eaten and the smell of nights out here, our car, the house Lesley had recently bought back in Atlanta.

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"There's a room built on top, just this one huge room, like some kind of tower or turret added on, so that it's the whole of the second floor. It has windows in each wall, four of them side by side. I walked into that room for the first time late one afternoon with the sun coming in at a slant, like water thrown across the boards of the floor, and I knew I had to have it. I wound up buying the house for that room."

At length we pulled into the hospital's deserted parking lot. Half a dozen or so vapor lamps set far apart and high on poles gave off a silvery light, sculpting the dark stretch of cement into something lunar. By contrast the corridors of the hospital itself were awash with white, bright as the bridge of a ship. The nurse at her station looked up and shook her head as we drew close, stepping out from behind the high counter to tell us how glad she was that we'd come when we did. The doctor had just been with him. He would be at rest soon.

Indicating that he would wait out here, Dan settled into a chair by an oval window looking down on the lot we'd just left. Lesley and I went together into the room. His head turned toward us as we entered.

Without speaking, we walked to him, Lesley to the right, myself to the left, and took his hands. His head went from side to side, just as those ducks' heads had done so long ago, from one of us to the other, though of course he couldn't see us. He was weak now, very weak, but as he struggled to summon what strength remained to him, to pull together these last fragments of his talent or his curse or whatever it had been, we both felt it. Felt him reach out to us. Felt things moving deep within us, rearranging there. Felt ourselves connected again, connected forever, as we stood there above his body.

"He's gone," Lesley said.

"Yes."

In the corner, a final bloom burst from the tip of one of the branches, red against the rest's ghostly white.

I looked back at my sister. Tears were in her eyes. I saw them through my own. ❍

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Tom Purdom's delightful futureday Casanova, Joe Baske, discovers the horrors of being too predictable in . . .

ROMANCE WITH PHOBIC VARIATIONS

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in pursuit of simulated versions of boars, dragons, and other real and mythological creatures. I didn't think it was such a great idea myself but people who loaned out capital were supposed to have some business sense. They didn't start threatening you with bodily harm when a scheme didn't start producing profits at the exact moment specified in the contract.

I had said that to Nento when she had asked me for a second loan. I had already helped her meet a payment date. My financial alter would start nagging me with warning messages if I yielded to Nento's pleas and made another dent in my capital.

"This is ridiculous," I had said. "I'll talk to them. I've got a few connections myself. I'll let them know they could be in serious trouble if they carried out any of their threats."

Nento's bright little eyes widened. "I can't let you do that, Joe. You don't know who you're dealing with. The people I borrowed from—they aren't the kind of people I usually do business with."

I had been threatened before but that didn't mean I could smile cheerfully and ignore all the pain and damage the two paragons of muscle worship could inflict on me. I had still been planning my approach to Nento's creditors when I had accepted their call. I had been visualizing the expressions that would cross their faces when they discovered they were inconveniencing a woman who had captured the fancy of the renowned Joseph Louis Baske. Now *I* was the one who was sitting in his parlor struggling with an unexpected attack of anxiety and dismay.

The Voice of the apartment broke into my emotional fog. A visitor was standing at my door.

The screen lit up and I found myself looking at another triumph of modern biology. This one was almost as tall as the two toughs and several times brighter. He was also better dressed. If he had straightened up his shoulders and acted like he had a normal supply of self-confidence, his white jacket and his embroidered sash would have made him look like a young prince. Unfortunately, he was only fifteen years old. He was slouching inside his clothes as if the microgravity of Phobos had drained all the energy out of his muscles.

I eyed him with a mixture of pleasure and embarrassment. His name was Sori Dali and he was the son of a gracious, wonderfully civilized woman named Denava Dali. Two tendays ago, his mother and I had been planning a liaison that should have lasted most of a Martian year.

"I have to see you," Sori said. "I've got something important to show you, Joe."

I stood up and greeted him as he came through the door. I had increased my height by 16 percent just before I had left Mercury but he was still over two heads taller. I had been a little taller than average height when I had reached my full growth back in the teens. Then I had slowly lost ground as the century wore on. Now, after eighty years, I was back where I had started.

He had brought a file card with him. He inserted it into my screen and faces started flashing past us.

"These are the faces of forty-one of the women you've been in love with in the last thirty-two years. I collected every picture I could locate in the databanks."

Memories prodded my emotions. Every face in the parade evoked a response—pleasure, pain, excitement, tenderness, melancholy. Some of them

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had reigned over interludes that only lasted one or two days. One had captivated me for forty-five minutes. Others had shared a companionship and intimacy that lasted for months and years. It didn't matter. They were all part of an adventure that has bathed my life in color and warmth.

"Now watch," Sori said.

A new set of faces flitted across the screen. They all looked vaguely familiar but none of them seemed to be associated with a name or a memory. Some of them were so haunting they actually aroused a feeling of longing as they vanished after their moment on the screen.

The last item in the series jolted me as if I'd been clubbed. Nento stared at me with her eyes glittering with life. The program turned her head to one side and she raised her chin and regarded me with a smiling, sidewise look that had been befuddling me for most of the last two tendays.

"I set up a program that made random composites based on the characteristics of the real women. Every time I've run it, it eventually produced this one."

The picture wasn't an exact replica of Nento. When you looked at it for a few seconds, you could see the differences. Nento's face was a little rounder. Her nose was a shade longer, her lips a little fuller.

"I know it's not a perfect resemblance," Sori said. "They probably used more pictures than I did. I suppose, too, there are limits on the changes you can inflict on a real person. Now look at this—this is what Nento looked like one eyear ago."

He was talking very fast, with little gasps for breath. I could smell the way he was sweating. He knew what he was doing to me.

The original Nento had a noticeably fuller face. Her lips formed a fleshy pout—a feature that seems to appeal to men who are looking for childlike, compliant sex partners. The face I knew had captivated me with lines that suggested a refined, controlled forcefulness. The face on the screen would have attracted a casual glance at most.

"If you look up the data associated with this face in the public databanks, you'll discover they've made some changes in her biography, too. I think we can also be confident they instituted some extensive temporary personality modifications. All the information in the databanks indicates you feel a woman's personality is just as important as her appearance. You react to faces, in fact, because you feel certain facial characteristics are associated with certain personality characteristics."

"I looked up Nento's personal biography," I said. "I always do."

"Did you look for news stories? You probably searched for her name, right? I worked backward from the face the composite program gave me. I did a visual search, looking for facial characteristics that matched the face they probably started with."

He pulled his card out of my screen and gave me some relief from the sight of Nento's true identity. "Somebody set a trap for you, Joe. They probably read the passenger lists. They probably knew you were coming here from Mercury. They designed a woman you couldn't resist. I wouldn't be surprised to learn they created a model of your personality structure, too. The information on you in the public databanks would support a model that would be adequate for their purposes."

If you look me up in the databanks, you will find a number of references in which people compare me to the great eighteenth century adventurer Gi-

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acomo Casanova. I resisted the comparison for half my adult life but I'm willing to admit there are similarities. There are times, in fact, when I wish he and I could sit down and compare notes. I've read all four thousand pages of his memoirs but a book is no substitute for interactive conversation.

Like Casanova, I have devoted my life to the peculiar combination of emotional and sensual pleasure we humans call love. Like him, I have always followed my heart wherever it led me. The things I do with the women I love are no different from the things most people do. In spite of all the fantasies created by pornographers, there really aren't that many possibilities. The things I feel, however, make every adventure an experience to treasure. Like Casanova, I have been in love with every woman I have ever pursued. The emotion is temporary. It never lasts. But it is a real emotion, nonetheless.

Now Sori was telling me someone had taken the central passion of my life and turned it against me. It was the most disorienting moment I have ever experienced. One part of my personality was outraged. The rest of it was still responding to all the complex emotions Nento aroused.

Usually, I can describe the response a woman is evoking, in the same way I can describe my response to a piece of music. With Sori's mother, the dominant appeal had been graciousness and serenity—a combination that had seemed like the perfect antidote to the turbulence of my last adventures on Mercury. The Mercurian habitat was a huge, world circling structure, with over half a billion inhabitants, but it had developed a social network that was so intricate I couldn't become involved with a woman without tripping over all the relationships created by my previous affairs.

I had encountered Denava Dali and her son two days after I had arrived on Phobos. I had been captivated when I heard them talking while they stood by one of the public viewscreens and observed the passage of the Martian landscape, ten thousand kilometers below us. Then—when Denava and I had been sitting in a cafe planning our next pleasure—I had looked at the table next to us and seen Nento. And found myself yielding to an emotional assault that was so complicated it made me feel like I was reacting to a Bach fugue.

It had been an embarrassing moment. Normally, a new woman doesn't attract me until the charms of the old one begin to fade. This was the first time I had been pulled away from a banquet that was just beginning.

Every time I looked at Nento—every time I *thought* about her—a dozen different emotions seemed to be interacting at the same time. The tilt of her chin held out a promise of challenge and revelry. The precise, graceful movements of her hands and the trim, subtly softened curve of her waist and hips added grace notes of elan and undertones of warmth and sensuality. When we had settled into our first real conversation, I had quickly discovered she was an irresistible mixture of the mature pleasure-loving coquette and the able woman of achievement. Every facet of her appearance and her personality seemed to be sending me a different message.

Could it really be true? Could they really predict the kind of woman who would exercise that kind of power over me? Could they really shape someone so she would fulfill all the requirements of the prediction?

But of course they could. The human race had been dealing with the ramifications of personality modification technology for over four decades. Twenty years earlier, when I had been tormented by a woman who had no interest in anything I had to offer, I had even considered using it on myself.

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"Your lifestyle makes you particularly vulnerable," Sori said. "You are committed to following your romantic impulses. You may want to consider a different approach in this case."

I stared at him through a haze of conflicting emotions. "She doesn't exist," I said. "She never did exist."

"Did she get any money out of you?"

"What difference does that make? Do you know what you're telling me?"

"But you have given her money?"

"I gave her a loan to help her deal with her creditors. Do you have any idea what this means to me? Is there any difference between telling me this and telling me she's dead?"

"I did some investigating after I found her face. She's a professional swindler—part of a three woman trio. It looks like they've been working the tourists for the last couple of eyears. I think I could help you get your money back. You might even get a little of theirs. I've been working on personality models ever since I was a child. I've already done some preliminary work on a model of her. We might work out an approach that would help us reverse the situation, if you'd help me get some more information on her."

His mother had paid for a genetic workup that had given him the best brain and the best general physiology the market could provide. If he had been playing around with personality models for the last six or seven years, he probably had the equivalent of a full professional degree in the subject.

I had only known him for four tendays but we had hit it off from the start. His hyped up physiology included a full set of male glands. He was right at the age when his hormones were racing through his arteries in full flood and he was enduring all that sweet, lovely turmoil in a time when girls his own age were almost as rare as people who suffered from genetic disabilities. His mother had been fifty-six when she had finally decided she wanted to explore the satisfactions of parenthood. She had done it right. She had every right to be pleased with herself. But she had produced an adolescent son who was surrounded by desirable women—and male rivals—who were, at minimum, two or three decades older than he was.

I had been giving him the best advice I could. For all his intelligence, he had been misled by the foolishness that besets many young men. He had assumed a woman was a prize who could be won by demonstrating your virtues. In his case, that was a recipe for failure. None of the women he met on Phobos were going to be dazzled by his worldly sophistication or his ability to pontificate on important intellectual matters. I was slowly convincing him he had to work with his weaknesses. He should give them the pleasure of leading an inexperienced young man through his first sexual adventures.

I bent at the knees and pushed myself toward the ceiling with my arms over my head. On Earth, when I was young, we used to say an agitated person was bouncing off the walls. On worlds like Phobos, you can actually do it.

Sori had found records that indicated Nento and her two accomplices had been working a gambling scheme. They pretended they were strangers and drew a victim into a four-way backgammon game. The dupe thought he and his partner were playing against another twosome. He didn't realize he was playing against three other people and they would split the proceeds when they had emptied his bank account. The victim was always a he, of course. The fact that the other three players were easygoing, well endowed women

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tended to numb his critical faculties. If he made too much noise after he realized what had happened, they spent a small percentage of their profits and employed the services of the two enforcers who had just called me.

"I think we can take it for granted there are no creditors threatening Nento," Sori said. "Your callers were undoubtedly engaging in a charade for the benefit of Nento and her partners."

Sori had been five years old when he had realized the people around him were not operating at random, even if they weren't totally rational. His mother had referred to the science of psychology when she had been trying to explain someone's behavior and he had looked up the subject in his encyclopedia. One eyear later, he had entered a few observations into his notescreen and constructed a model that correctly predicted her newest male acquaintance liked to eat melons for breakfast.

"The motivations of people who engage in criminal and antisocial behavior have been rather thoroughly mapped," Sori said. "It was one of the first subjects personality modelers placed on their agenda. There are only approximately six reasons why people are attracted to swindling crimes. If you'll just visit Nento two more times—perhaps three—and record her responses to certain actions, I should be able to eliminate the motivations that aren't applicable. And construct an accurate picture of the emotions we should work with."

It was a dangerous idea. Could I really sit in the same room with Nento and coolly execute Sori's instructions? If Sori was right about her, I should hop on the next spaceship to the asteroid belt and put two hundred million kilometers between us as soon as possible.

So why did I let myself accede to Sori's schemes? At that moment, buffeted by an emotional whirlwind, I think I did it primarily because I would still have a relationship with Nento if I participated in his maneuverings. It might be a perverse relationship but it was better than no relationship at all.

It was the first time a woman had made me feel that way. I'd met a few teasers who kept pretending they might eventually yield to my stratagems, just so they could keep me pursuing them. None of them inspired thoughts of revenge, no matter how angry they made me. They had toyed with my feelings because they had taken emotional pleasure in being courted. They hadn't turned themselves into traps so they could add a few more neils and yuris to their bank accounts.

Nento was all smiles when she came on the screen. Her eyes deepened with sympathy when I described my conversation with the two intimidators. If I hadn't seen Sori's evidence, I would never have suspected my oversized callers had been carrying out instructions they had received from her and her accomplices.

"You did your best, Joe. I'm certain you did your best. Phobos is one of the most lawless places I've encountered. It looks civilized but people like them can do almost anything they want."

I couldn't argue with her about that. Phobos had a government of sorts, complete with courts and a police force, but it was controlled by three political factions, and the members of all three were mostly interested in the bribes and fees they could collect. I had browsed through the information Sori had collected. If Phobos had been run by a real government, Nento and her two colleagues would have been paying serious penalties.

Sori had scripted the exact words I should use when I told her I wanted to

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see her again. I repeated them as instructed and we cycled into the pattern that had been driving me insane for twenty days. Her work was becoming terribly demanding, Nento maintained. Perhaps she could give me twenty minutes just before her dinner appointment. She couldn't see me for lunch tomorrow, but she had an hour right after lunch the day after that. . . .

Usually I pursue a woman by placing myself in the right position and letting one thing lead to another. With Nento, I had told her how I felt the first time I was alone with her.

"That's very flattering," she had said. "Are you telling me I have become the current obsession of the famous Joseph Louis Baske—a man who has been compared to the legendary Giacomo Casanova?"

She had been looking at me out of the corner of her eye, with her head tipped back and a smile playing around her face—a look I was going to see a hundred times in the future. I knew she was going to be a problem. I knew she was pulling me back into the turbulence that had ended my sojourn on Mercury. It didn't matter. Nento had implanted an ache that nagged me like a chronic illness. I wanted her. I wanted to touch her. I wanted to hold her. I wanted to look at her.

I shared a couch with her during the twenty minutes she had granted me before her "dinner appointment" and the ache grew stronger all the time I was there. The hour two days later was just as difficult. I managed to recite the scripts Sori had given me but it all seemed irrelevant. Why should I care how she reacted when I knocked over a glass of wine? What difference did it make if she laughed and said "red and yellow" when I asked her what kind of flowers she liked?

I held her for a long minute at the end of our twenty minute rendezvous. She chuckled with pleasure when she nuzzled me during the session that lasted one entire heady hour. In my current state, that was all that mattered.

Her responses evoked satisfied nods from Sori. He sent me back one more time, to settle some doubts he had, and made his pronouncement.

"She's primarily interested in dominating people. She probably sees herself as a kind of hidden center of power, operating the controls that make other people do what she wants."

I had acquired some skill with sociological models. They can be very useful when your chosen lifestyle bounces you from one social milieu to another. Personality models were another matter. I understood the rudiments but most of the vectors and symbols on Sori's screens were meaningless lines and blobs.

But what did you do with the model after you had it? Sori could map Nento's motivations but I was the one who created a scheme that would exploit them.

"I gather you find Nento attractive," I said.

He put on his best man-of-the-world air. "I wouldn't turn her down if she made me an offer."

"It seems to me we should let you be the target. We can tell her you've come up with a new scheme for playing the currency markets—something that could only be devised by someone with your intellectual powers. Normally, you only work with clients who have very large sums of money. Since you find her desirable, however . . ."

"And then I let her feel she's getting me under control. She invests some money with me and we let her get a profit, right? Then we let her raise the investment. And my marvelous, secret wonder-method suddenly fails."

I smiled politely. His eyes had widened and he was talking with the over-

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heated rush he fell into whenever an interesting new idea popped into his brain. I had planned a detailed briefing, complete with little lectures on the fundamentals of the swindler's art. Somehow, I always seemed to underestimate his abilities.

Nento maintained an air of studied coolness when I told her I had stumbled onto a way she could raise money herself. She frowned—a very fetching frown—when I suggested Sori might grant her access to his investment programs because she appealed to his youthful longings.

"Are you suggesting I should use sexual attraction to help me acquire *money,* Joe? That doesn't sound like you."

"He's a young boy," I said. "He's only fifteen. I'm merely suggesting he might be willing to make an exception in your case and give you a temporary spot on his client list. He'd probably think you were doing him a big favor if you just talked to him on the phone for ten minutes."

"I'm still surprised you'd even suggest such a thing. I didn't think women who behaved that way appealed to you."

I bypassed her protests by launching into a description of Sori's financial success, complete with reports that indicated he had been making 10 to 30 percent every five tendays, with no periods in which he had suffered a loss. The reports were modified versions of the achievements of my own financial alter. They looked authentic and for the most part they were. My alter is about as good as they get. I buy every upgrade that looks worthwhile as soon as I feel it has proved itself. I had merely eliminated most of the down days when I had made up the reports.

"It certainly does sound intriguing," Nento said. "Do you think he might be interested if I approached him with a straight business proposition? I could offer him a share in my business, for example, in exchange for a place on his client list."

She really was an accomplished actress. At that point in its history, Mars was mostly inhabited by researchers, conservationists, and a small number of people who were studying various terraforming schemes. None of them, it seemed to me, sounded like people who wanted to go tallyhoing after robots. Phobos had become a major tourist point because they had lobbied for laws that discouraged travelers who wanted to visit Mars for frivolous purposes. She couldn't possibly believe a financial genius would take a serious interest in her business proposal.

Sori was almost as disoriented as I was when he finished her first call. She kept him on the screen for almost two hours. She started out with a pure business approach and slowly switched to something more effective. She gave him the same out-of-the-corner-of-the-eyes looks she gave me. She got up from behind her desk and let him admire the long, elegant lines of her hips and thighs as she walked around. She smiled at the way he reacted to her and let him know she didn't mind it at all.

Naturally, she made him promise he wouldn't discuss their relationship with me.

"Joe is a very nice man," Nento said. "He's a little over-experienced, if you know what I mean. But I think his feelings should be treated with care."

"I'll do whatever you want," Sori affirmed. "Just tell me what you want."

He stopped the recording at that point when he played it for me. "Watch the flash in her eyes," he said when he played it back. "See. Right there."

"I saw it. You don't have to know much about human nature to guess what she's feeling."

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"In the past, criminal behavior was always associated with motives like dominance or self-esteem, in addition to pure economic motives. The balance between economic motives and psychological motives has apparently shifted in the last few decades, as the spread of fabricators and molecular technology has affected human attitudes. Now that we can all live very pleasant lives without spending money, the psychological motives have apparently become dominant and the economic motives have become secondary."

I once spent an arduous period tramping through Peru with an ethologist. Sori reacted to the things he learned about people in the same way she had reacted to the things she learned about the mating behavior of tree frogs. Discoveries that would be obvious to anyone over thirty-five were big revelations to Denava's genetically enhanced offspring.

And underneath it all, he was still basically an adolescent male plagued by the most powerful hungers evolution has bestowed on our species. Nento could have maneuvered him as if he were a robot. Fortunately, I was the one who handled the money. We combined Nento's test money with my capital and my alter maintained its winning streak. I topped off her real profit with an extra 10 percent, just to make it look juicier, and her eyes gleamed again.

Sori didn't give in too easily, of course. He had held out for a day or so before he let her make a test investment and he wavered again when she told him she wanted to put in a bigger sum. His system didn't work well with small amounts, he claimed. He was risking a big loss when he added such a trivial quantity to his capital.

I'm not a jealous person. All my loves eventually end. Why should I become insanely angry if the object of my desires enjoys some variety, too? Why should I care if a manipulative little thief exploits her charms for another dupe? In Nento's case, none of my normal reactions seemed to be functioning. Nento responded to his delays with a long session in her apartment and I spent three hours bouncing around my own place and thinking about the soothing concoctions I could create with the fabricator I had purchased when I landed on Phobos. I had left my old personal fabricator on Mercury, to save weight charges. The programs packaged with the new one included a huge menu of psychoactive drinks.

Sori looked quite pleased with the world when he gave me his report. "I have to say, Joe, I'm beginning to understand your lifestyle. There are worse ways to spend your life, aren't there?"

"I take it you enjoyed yourself then?"

"Oh, yes."

"And how did our business arrangements go?"

He smiled. "I let her know I would reconsider my objections to her investment hopes and give her my answer the next time we met. She informed me that wasn't at all satisfactory and indicated she might not be free to see me again if I didn't submit to her financial demands. And I reluctantly accepted her transfer of the sum you and I had hoped to wrest from her."

"So we have her."

"*We* have her economically. *I,* my good friend . . ."

"I understand. Enjoy your memories."

"If it hadn't been for you, Joe . . ."

"I understand, Sori."

I cut him off and conjured up the liquid that offered me the fastest form of chemical escape.

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The sums we were dealing with would have looked absurdly small when I was young. The molecular technology revolution had made me glad I earned my living investing in currencies instead of equities.

The fabricator had obviously made some uses of money almost obsolete. Who needed money when you could create food, clothing, and most of the necessities of life merely by inserting common substances into a fabricator equipped with the proper programs? On the other hand—what did you do to earn money when so many things could be acquired without labor? A table in a good restaurant still cost money—even if I could create the same food myself. So did fashion. My tastes in clothes are reasonably sober but I'm not going to run around in garments created with out of date bootleg programs.

So Nento and I each had something in common. The money was important but it wasn't the main reason we were trying to bilk each other. I had spent a bigger percentage of my working capital on other women and received just as little in return. For me, the true reward was the moment when I put Nento on my phone screen and told her Sori's program had returned one of its failures.

Her response was a look of pure horror. "You told me he was a financial genius. You said his system never failed."

"Every system fails now and then. Nobody can invent a system that can predict the fluctuations in the markets with perfect accuracy."

"I have to get that money back, Joe. You have to lend me more money. *You don't know what you've done to me.*"

"The amount you invested is a very small percentage of the sums you claim you owe your creditors, Nento. It can't possibly make that big a difference."

"You don't understand! That money belonged to some friends of mine. *I was supposed to be holding it for them.*"

I had assumed she was acting. Now I was beginning to think she really was terrified. I had never seen the two female accomplices Sori had mentioned but I had assumed they had been lurking in the background while Nento attempted to manipulate me. Had she taken money she was supposed to share with them and invested it in Sori's mythical system? Had she tried to make a little profit on the side without mentioning it to them? I could see how she could be in serious trouble if she had.

"You have to help me, Joe! Don't desert me. Don't leave me alone."

I had been imagining an immensely satisfying scene: she would be the bewildered dupe and I would be the master schemer who had outwitted her. Instead, I was looking at a woman who seemed to be in serious trouble. Suppose I gave her—as a gift—the money I had just wiggled away from her? It was the same sum she had originally taken from me but this time I might actually get something back in return.

Was she capable of gratitude? Would she just take the money and resume her campaign to get everything else I had?

"You'll have to tell me the details, Nento. How much trouble are you really in? If—"

Sori stepped up to the screen and switched it off. "That's it, Joe. She'll have you begging her to take everything you own if you keep on talking to her."

"She's in real trouble. That's not an act."

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"It's not your responsibility. She's a thief and a prostitute. She's spent her life creating the same kind of trouble for other people."

"That's not the way you sounded the other day."

"I'm not like you, Joe. Your sexual feelings are associated with a strong measure of the emotions humans are referring to when they say they're in love—tenderness, idealization, affection, companionship, concern for the other person's welfare. According to most theorists, those emotions evolved because primitive humans had to create bonds that would keep them together during the long period required to raise a human infant to full social maturity. In your case, the so-called romantic emotions don't seem to last long enough to create the desired effect. But they seem to be exceptionally strong while they last."

"And you don't feel that tendency to create bonds?"

"Not in Nento's case. I enjoyed the interlude I spent with her. I would certainly like to repeat it. But I have no interest in her outside of the sexual pleasure I enjoyed with her."

He left me and I once again found myself coping with a cauldron of emotions. This time I turned to an escape that had been one of my chief consolations for over sixty years. I had installed my first musical performance system in my nervous system back in the thirties, during one of my happiest affairs. The system had given me so much pleasure I had installed one or two upgrades every decade since then. Just before I left Mercury, I had purchased a fabricator program that reproduced one of the finest violins made in the seventeenth century—a Nicolas Amati with a lively response and a tone that captured the noblest qualities of Baroque musical culture. I turned my attention to Bach's great ciaconne in D minor and spent the next forty minutes totally immersed in the challenges and mysteries of its thirty-one variations.

It was a wonderful vacation but my internal chaos took possession of me minutes after I put down my bow. Could I really regard any woman with the detached objectivity Sori had displayed when he had described his attitude toward Nento? Nento was an artificial construct but she was still a human being. The emotions she aroused were real emotions.

The Voice of the apartment interrupted my brooding. The two gentlemen with muscular physiques had an urgent message for me.

They had discarded the slovenly look. This time they were dressed in the height of fashionable dandyism, complete with high collared tunics that held their necks militarily erect. The one on the right initiated their spiel.

"We don't know how well you understand the situation here on Phobos, Honored Baske. We should advise you that certain kinds of behavior are generally handled privately, between the parties involved, without the time-consuming procedures required by the court system. In most cases involving the kind of behavior you've engaged in, the court system will support the results of the private settlement."

"I'm afraid I have no idea what you're talking about," I said. "Exactly what type of behavior are you referring to?"

"You and your accomplice, Sori Dali, conspired to relieve Aki Nento of the sum of twenty thousand neils by fraudulently claiming you were investing her money in the currency markets. You retained the money instead and fraudulently advised her you lost it."

"We have no reason to doubt the accuracy of the claim," the fop on the left

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said. "Nento has shown us a recording of a conversation between her and your alleged accomplice. He described the whole scheme to her in some detail."

"Sori is only fifteen years old. He would say almost anything to an appealing woman at this stage in his life."

"We would advise you to stay in your apartment until you are prepared to return the sum you stole from your victim, with a 10 percent addition to cover our participation in this matter. We have full, legal access to the public surveillance system."

I called Sori as soon as they cut off and his screen told me it would be glad to take a message. I called again ten minutes later and got his mother. We exchanged stiff, awkward greetings and she called Sori to the phone.

"I just got a call from the two hoodlums who tried to threaten me earlier. Did you really tell Nento what we'd done?"

"They called me right after they called you," Sori said. "I was worried about you, Joe. I could tell you couldn't stand up to her if she kept after you. I called her up so I could tell her we knew all about her. I thought she might leave you alone if she realized we know what she is."

"And while you were at it, you told her how we'd duped her."

"I thought it might convince her she couldn't outmaneuver us."

"Did your model of her tell you that's how she'd react?"

"I didn't use the model. It isn't that complete."

"And now I can't leave my apartment without an all-out assault by a pair of giants. And neither can you, I presume. Or your mother. They have full legal access to every surveillance camera in every corridor and public space on this entire moon."

"I understand that, Joe. I'm working on a solution."

"What are you going to do—find some way to make us invisible to the cameras?"

"I'm trying to get us to the surface. To Mars. They can't bother us on Mars."

Sori had contacted the appropriate authorities on Mars and let them know a junior super-genius wanted to join them. He would participate in any endeavor they chose, he had offered, if they would just grant him one small concession: let him bring his mother and one of her friends.

"I'll need some on the job training," Sori said. "But I can achieve basic competence in almost any scientific specialty in three or four tendays. My current knowledge of mathematics and general science would probably be considered the equivalent of several doctorates in several widely varied fields. You'll like Mars, Joe. The accommodations aren't as luxurious as the accommodations on Phobos and Mercury, but most of the women are physically active, highly competent professionals. If you look back over your life, you'll find 70 percent of the women you've pursued meet that description."

Four hours after he started negotiating, he let me know everything was settled. We would make the descent in five hours. A bumper cargo vehicle was being outfitted with passenger couches.

"I felt we should leave as soon as we can," Sori argued. "A bumper may not be a luxury conveyance, but it's available."

"And how do I get to it without being disassembled by two of the larger residents of Phobos? I believe the embarkation lounge for descent vehicles is about ten kilometers from my front door."

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A map of the local corridor system popped onto the screen. "There's an exit to the surface not too far from your apartment. You'll find a pressure suit waiting for you there. Take this elevator here just after you leave your apartment. Get off at this level and take this elevator here. We'll travel across the surface to a hatch that opens into the bumper's loading area."

"Have you ever used a pressure suit, Sori? Has your mother?"

"We're going to spend most of the next four hours working with the training simulation. I should have no trouble achieving proficiency between now and our embarkation time."

He was speaking very calmly and precisely, but I could see the glitter in his eyes. For him, it was the kind of adventure boys dream of. He was probably visualizing the way some of those "physically active, highly competent" professional women would react when he recounted his exploits.

My own visualizations were less buoyant. Sori had never been pursued—or caught.

But what else could I do? Return the money to Nento? Every time I thought of that, I responded with the same outrage I had felt when I had learned Nento was a manufactured lure. I couldn't escape from the emotional tangle she and her accomplices had created. I hated her because she had taken the emotion that has shaped my whole life and turned it against me. And I wanted her because she was a woman who had been trimmed and tuned until she fitted a template that matched some of my deepest longings.

I left my apartment a few minutes before the time Sori had given me. I sailed down the corridor as if I was aiming for an intersection on the far side of the elevator. I brushed the elevator button as I passed it and received the blessings of a minor miracle: the door opened just as I hit the floor. I threw myself at the elevator with my arms stretched in front of me and managed to grab the edge of the door before it started closing.

I was already slipping into pursuit panic when I stepped onto the floor where I was supposed to switch elevators. The new elevator was clearly marked *To Surface Exit*. The nearest surveillance camera was housed in a rotating ceiling mount about ten meters down the hall.

The donning room was a cheerless space a little bigger than the elevator. The exit had obviously been created for the benefit of people doing minor maintenance. The pressure suit was waiting for me on a shelf near the airlock, neatly folded into a square container. It had been manufactured by the same company that produced the last pressure suit I had worn. That had been almost thirty years ago, on the Moon, and a female killer had been pursuing me across the lunar regolith. The instructions that talked me through the donning procedure had been recorded by the same actress who had guided me through the process on the Moon.

The second container on the shelf confronted me with a novelty—a jet harness with propulsion tubes on each shoulder and eight maneuvering thrusters arranged around the straps. No one walks on the surface on a microgravity world like Phobos. I would skim across it at twelve kilometers per hour, gamely hoping my sessions with the simulator would help me avoid embarrassing end over end tumbles.

I exited into a field of solar panels. The top third of Mars' big red-orange disk loomed over my left horizon. The surface of Phobos was solid black in every direction—not *blackish,* or black *streaked,* but a real, undiluted *black*—and the glow from Mars created attractive effects. I clicked on the guidance program Sori had installed in the suit and the famous actress

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started giving me instructions. I was supposed to line myself up with the yellow guidance arrow on the screen built into my right glove. I should keep moving in that direction until I passed the last row of panels and reached a large building with a lot of cables leading out of it.

The panel field ended just a few meters from the side of the building. It had been three decades since the first molecular machines had started transforming Phobos into a human habitat. By now, solar panels covered almost half the surface area. Most of the rest of the surface was cluttered with cable housings, recycling ducts, antennas, storage facilities, and all the other paraphernalia that keep civilization going. To someone who was born on Earth, places like Phobos look like inside-out cities. The people live inside and the surface contains all the things that are normally hidden under streets on Earth.

"You should wait here for the rest of your party," the suit said. "They should be here within five minutes. You should proceed without them if the wait exceeds twelve minutes."

I was early, they were late. I had been searching the horizon for a good ten minutes when I saw a silver suit and a red suit skim over a pair of tubes that dominated a rise about two hundred meters from the building. The silver suit was bigger than the red suit, so I assumed it contained Sori—a hypothesis that he confirmed by speeding ahead of his mother and executing a smooth series of S curves. He waved me on and we converged on a route that paralleled another set of tubes.

Sori obviously mastered physical skills as easily as he conquered intellectual subjects. He was getting a lot of childish amusement out of the fact that he could assume almost any position he wanted to, once he propelled himself in the right direction. Once you're following the right trajectory on an airless microgravity world, you can rotate into any orientation that catches your fancy, as long as you maintain your height with a slight upward push from your thrusters. At one point, Sori managed to arrange himself so he was moving backward, with his feet pointed at the sky and his head aimed at the ground.

In spite of his tricks, Sori was keeping his fuel consumption to a minimum. His mother was another matter. Denava kept zigzagging across the course she was trying to follow. She would veer too far to one side, overcorrect, and veer too far the other way. Her orientation tended to be erratic, too. She kept overcorrecting her orientation in the same way she overcorrected her course deviations.

"It's a tricky skill," I radioed her. "Try keeping your bursts as short as possible. Don't be afraid to tumble some. It's the direction you're moving that counts, not the direction you're facing."

"You seem to have picked it up pretty fast. My show-off son said he thought you'd never done it before."

"I've had a lot of practice running away. I tend to be good at learning skills that can help me do it."

I grabbed her shoulder and applied a burst from my jet that helped her stabilize a right hand yaw. Her voice had sounded cool and totally unruffled. She really was a magnificent woman—warm, intelligent, collected. If it hadn't been for Nento, she and I would probably be sharing a quiet moment in some peaceful little corner. I had known I was sacrificing pleasure for turbulence when I had turned from her to Nento. Now I even knew my emotions had been manipulated by predators equipped with all the tools of

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modern psychology. And none of that knowledge gave me the slightest comfort. I was doing something I had never done in my life. I was denying the deepest impulses of my personality. I was running away from someone I should be moving toward.

The two muscleheads were both wearing black pressure suits. They should have taken us by surprise, given the color of Phobos' surface. Fortunately, they seemed to be just as inexperienced as we were. They came at us with the glow from Mars behind them, weaving around a long, badly calculated trajectory that gave us plenty of time to react.

We were still about twenty-five minutes from our goal. We couldn't outrun them with Denava slowing us down. They didn't even have to catch us. Once they realized we were trying to reach the hatch to the bumper vehicle, they could just race ahead of us and camp in front of our objective.

"I think we should split up," I said. "You go with your mother, Sori. Have you figured out how we should handle this?"

"Yes."

We broke to the right, on courses that differed by approximately twenty degrees. Denava wobbled into her son's legs as she tried to get on the right path and Sori grabbed her harness with both hands. He fired a burst that compensated for her movements and they sailed toward a trio of dish antennas.

The hoodlums did what I'd hoped they'd do. One veered toward me and the other raced after Sori and Denava. A thick stream of reaction mass spewed out of their jets.

The surface of Phobos is scarred by big grooves that look like they've been ploughed by grazing meteor strikes. I dropped over the rim of the first groove I came to and fired a burst that brought me to a halt near the housing for an exit hatch.

My stalwart pursuer had used up a satisfactory quantity of fuel trying to catch up with me. Now he had to spew more fuel slowing down as he came over the top of the groove. I couldn't see his suit but I could spot the white bursts from his jet.

They were very talkative boys. I had located the radio frequency they were using and I could follow most of their activities merely by listening to them. I had been assuming Sori had come to the same conclusion I had and I had apparently been right. He and his mother were hiding somewhere, too, and the musclehead pursuing them was circling the landscape in an attempt at a search pattern.

The key factor in the situation was the reaction mass left in our jets. Our pursuers had to use up fuel trying to overtake us when we ran away. They had to use up even more fuel looking for us when we hid. Sooner or later they should run out.

The genius who was hunting me was kind enough to let out a yell when he finally took a close look at the hatch housing and realized the lump crouching beside it was the object of his quest. He gave me more useful help when he rushed straight at me with his jet releasing a long white plume. I cut away from him and glided toward a huge solar panel field while he reversed direction.

He had been going so fast he had to execute a wide curve to change direction. I slipped under the panels at the edge of the field and decided to take advantage of the fact that every panel was mounted on a thick upright. I cut

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my speed with the jet and started moving through the field on muscle power, heaving myself from upright to upright. The uprights were so lightly constructed I thought the first one I grabbed was going to bend. I lightened my touch and began covering ground without using fuel.

It was a sound economy measure but it wasn't as clever as it looked. I didn't realize I was shaking a solar panel every time I wrapped my hand around an upright and pulled myself along. My esteemed adversary noticed my trail when I was somewhere in the middle of the field.

His howl of triumph knifed my eardrums. "I've got him! He's doing something that makes the panels quiver. I can follow the little lap toy just like he was leaving footprints!"

I've never understood why a man who enjoys the pleasures created by sexual differentiation should be considered less masculine than someone who spends his days adding extra bulk to his muscle tissue. Sexual union is, after all, the primary reason we're supposed to build up our strength and display our competitive prowess. Apparently the male who wins a woman's favor by flexing his muscles is somehow superior to the "lap toy" who merely offers her a pleasant interlude.

I searched for him through the cracks between the panels and spotted the glint of his helmet visor. He was holding station about a hundred meters up, where he could observe the whole field without moving. He had to fire his jet to maintain his altitude but he could do that with a trickle of fuel consumption. He could have kept me pinned down for another hour.

I stopped swinging from panel to panel and started working my way toward the edge of the panel field in a series of precise, carefully planned hops. With every hop I had to take two factors into account: I couldn't touch a panel and I had to stay close to the ground, so I wouldn't waste a lot of time coming down. If you drop a rock from shoulder height on Phobos, you'll spend twenty seconds watching it fall to the ground.

I turned on my jet as I emerged from the field and we started another round of pressure suit tag. He was a dangerous adversary, in spite of my low opinion of his intellectual capabilities. A pursuit in an airless, soundless environment is a nerve-wracking enterprise. It acquires extra grimness when your opponent happens to be wearing a black suit. The hound can be reaching for your throat before you know he's anywhere near you. He would have gotten me if he could have repressed his tendency to shout in triumph at the last minute. The fact that I was less massive helped me, too. For every second I held my jet open, I gained about sixty percent more speed than he did. I could change direction faster, too.

Sori adopted a more violent approach to his half of our problem. He let his man grab Denava and closed in while the oaf tried to get his capture stabilized. Sori applied some kind of martial arts pain hold and Denava followed her son's orders and held on. Their captive dragged them through a dizzying series of random maneuvers as he used up fuel struggling to break free. His super-strength arms shoved Denava away from him with a thrust that was so strong she had to waste fifteen seconds of fuel bringing herself to a stop.

They were almost two hundred meters above the surface when Sori's overgrown opponent started complaining he had run out of fuel. Sori checked the gauges on the poor fellow's jet harness to make sure it was true. Then he fired a burst from his own jet and put his helpless bundle on a trajectory that would bring it to a soft landing several kilometers from the bumper hatch.

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I followed the struggle through the grunts and shouts coming through my earphones. It was a vivid demonstration of the problems I would have if I let my own pursuer get his hands on me.

My suit was keeping track of my fuel expenditure. Every five minutes, the voice of the famous actress advised me how much I had left. I was down to nineteen minutes and I estimated my dance partner had been working his jet at least two minutes—or even three—for every minute I used mine. I could reach our objective with three minutes to spare, if my position indicator was correct. But he could probably reach it, too.

A familiar voice broke into the radio net. "What are you geniuses doing? Can't you see they're trying to make you use up your reaction mass? Haven't you realized they're obviously trying to reach the surface hatch for the bumper lounge? Quit playing children's games and get to the hatch before they do. They can't use the hatch if you're looming in front of it."

I had known Nento was an intelligent woman. The prescription for stimulating the romantic feelings of Joseph Louis Baske has always included liveliness, awareness, general competence, and all the other qualities a well-equipped head confers on the human personality. The people who think beauty is only a surface phenomenon have never understood the messages conveyed by the lines and movements of the female face. Until now, however, my perception of Nento's intelligence had been tempered by circumstance. Her imaginary business project had seemed dubious. She had responded to Sori's psychological manipulations as if she was incapable of skepticism.

Now her voice was crackling with competence. Now I was getting a glimpse of the woman who had planned the trap her trio had set for me. She and her accomplices had survived years of criminal activity. Her vocation might not favor people who possessed compassion and a refined sense of ethical behavior but it tended to weed out the dull witted and the weak spirited.

My pursuer had been charging at me from the starboard side in his usual style. He swerved to the right and shot toward the bumper hatch with his jet churning out a stream that looked like it could push him all the way to the asteroid belt. Nento was urging him to watch his fuel consumption but I discouraged that line of thought by blasting after him and drawing even with his left shoulder. He turned his helmet in my direction and I underlined the message with an energy wasting spurt that gave me a temporary hundred meter lead. I gave him a snappy wave as I shot past him and he rewarded me with a satisfying roar.

His safety mechanisms took over when he was a good two kilometers from the hatch. The jet stopped firing and the thrusters cut his forward momentum as he settled toward the surface. I looked back as we drew apart and saw him settling into another cluster of solar panels. He was advising Nento he had run out of fuel and she was telling him he should head for the hatch on foot as soon as he touched down.

My own reaction mass ran out when I was about four hundred meters from the hatch. I hit the surface with a slight lurch, just two hundred meters from safety, and started working my way through a tangle of cables and recycling tubes.

Nento grabbed me as I was jumping over a big pair of cables. She didn't say a word when she did it. I just felt something grab my harness and pull me almost straight up. She let me go after a few seconds and I went up to a

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hundred meters and started to descend—a process that would take me almost two and a half minutes.

Her hands gripped my shoulders and turned me around. She had placed herself on the same trajectory. She backed off just out of arm's reach and we floated down together.

It was one of the more embarrassing moments in a life that has included some illustrious examples of the genre. Without my jet, I was as helpless as a baby. She could shoot me back up when I got near the surface and keep me rising and falling as long as she wanted to. And while I was bouncing up and down like a rubber doll, her large, very frustrated muscle boy was hopping across whatever obstacles the landscape put in front of him.

"I really find your behavior hard to believe, Joseph. I told you what the situation was. If they don't get their money out of you, they'll find some way to get it out of me. Is this the way you've treated all the women you claim you've loved?"

"You duped me," I said. "You redesigned yourself just so you could squeeze money out of me."

"Isn't that a little harsh? Didn't all those other women make a few changes here and there, too? What would we all look like if we didn't take advantage of the possibilities of modern medicine? Didn't you add a few centimeters to your height just recently?"

"It's not the same. That's normal behavior. You can't compare it with the scheme you set up. You took one of the best things evolution has given us and manipulated it for money. So you could add a few numbers to your bank account."

She stretched out her arm and ran her finger across the front of my helmet. "And why are you arguing with me, little Joe? Would you be arguing so hard if you were as angry as you say you are? Would you be engaging in such heated rhetoric if you didn't know you really want to give me everything you have to offer? In exchange for everything I can give you? Do you really want to run away to Mars and never know what you and I could have together? You're looking at the perfect woman, Joseph Louis—the woman shaped to fit your dreams. The woman you've been looking for all these decades. The woman none of the others *quite* were."

Sori had grasped the value of silence without being told—just as he seemed to understand all the tactical realities of our situation without being told. He swooped at me from behind Nento's back when we had fallen about eighty meters. He tackled me around the waist with his jet set at full power and started driving me toward the hatch. He even managed to sideswipe Nento and propel her into a tumble as he did it.

It was a nice try but he was working with a serious handicap. Nento had just started using her jet. Sori had been optimizing his fuel consumption as if he had been working with a built-in computer program, but he had been forced to waste fuel stabilizing his mother and fighting it out with his half of the muscle twins. Nento stabilized herself before we had been traveling ten seconds. She grabbed me from the right side, with her arms stretched out, and started pushing us off course as if she was some kind of airborne tractor.

I closed my eyes. "Give it up, Sori. Get yourself and your mother out of this. Before you end up flopping around without any fuel, too."

"You're reacting with your emotions, Joe. I heard what she said. I'm not going to let you give in to her."

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"You can't win. It's simple physics. She's got more fuel than you do."

He let go of me and activated a jet thrust that pushed him down a few meters. He shot straight up and drove his shoulder into Nento's stomach with a force that indicated he had never developed any inhibitions about the damage he could inflict on the female body. They bounced away from each other—action and reaction—but Nento retained her grip on my jet harness.

I was giving Sori the kind of advice the young should receive from their elders. He would obviously be a lot happier on Mars than I would. Did he really think his mother would enjoy seeing him battered into unconsciousness and left lying on the surface with a few well-placed gaps in his bone structure?

But I knew he was right, too. My mind was already toying with the possibilities Nento had raised. I didn't think our time together would turn into a permanent liaison, in spite of the hold she had on me. But suppose it did go on for awhile? I would start by giving back the money I had taken from her—freely, as a gift. Then I could feed her more money from time to time, to keep her coming back.

I could visualize the whole interlude. I could see everything we would do together, from the moments when I would hold all that naked loveliness pressed against me to the small, mundane activities that glow like jewelry when you do them with a woman who excites cravings that permeate your entire personality. Did it really matter how much money she eased out of my bank account? Hadn't I always claimed I had spent my life enjoying something that was worth almost any sum? Nento and her partners had enmeshed me in their trap because they had offered me something priceless—a woman who had been deliberately endowed with the attributes that would give me the greatest pleasure and evoke the most powerful responses.

I couldn't twist myself around without help but I could lower my left hand and grab Nento's right forearm. I could pull myself around, once I had a purchase on her, and wrap my fingers around her other arm.

There were a number of things Sori could do once I had her hands immobilized. He could have smashed her hard in the head, for example, and knocked her unconscious. He chose one of the simplest and most elegant alternatives. He maneuvered underneath her and unlatched the two buckles that held her jet harness in place.

She activated the jet and tried to pull away from him, but we both held on. The harness was designed for a quick release in emergencies. Sori ripped it off her suit and pushed her into a vertical trajectory that looked like it would keep her aloft for at least five minutes. He launched himself at me as soon as he let her go and we shot across the three hundred meters that separated us from his mother and the hatch to the bumper lounge.

We reached the lounge just three or four minutes before they closed the boarding gate, which was a blessing in the circumstances. By the time Nento managed to land and cross the surface, I was safely strapped into my couch and all the hatches on the lander had been sealed.

"I knew you wouldn't let her lure you back," Sori pontificated. "Your personality structure includes a strong autonomy vector, Joe. You never mention it when you describe yourself, but it's there, even if you aren't aware of it. It probably has more influence on your behavior patterns than you think.

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It's obvious women exert a strong effect on you. But that isn't the only reason you never form a long-term bond."

A descent in a bumper lander is just as dull and terrifying as most rides in space vehicles. You lie on your back in a windowless, grimly functional closet and hope everything works when it's supposed to.

First you wonder if the heat shield will survive the initial contact with the atmosphere. Then you wonder if the parachutes are going to open. (I even wondered if the parachutes really *had* opened, in spite of the lander's reassurances. Isn't it possible the program would lie to you, so you wouldn't scream too much as you fell to your death?) The wait for the news that the retrorockets have fired adds a little more tension.

The big exception to the standard routine of boredom and apprehension is the airbag landing. We bounced five times altogether and we were all laughing and making whooping sounds by the time we started down for the second bounce. A Mars bumper lander is the biggest trampoline the human race has built to date. The parachutes and the retrorockets do their part but a drop of 10,000 kilometers still gives you an eminently satisfactory set of bounces.

I had left my personal fabricator on Phobos but I had brought copies of all the fabrication programs I had purchased over the last thirty years. That night we toasted our success in the best champagne on the menu. There was a little awkwardness over the sleeping arrangements, as you would expect. Sori had told the Martians his mother and I had a domestic arrangement and they had given him a two bedroom suite. I manfully announced I would camp out in the living room but I was voted down. Sori had already started stuffing the living room with equipment and turning it into a major office facility. He would be doing a lot of inperson entertaining and consulting, too. I would obviously be in the way if I tried to use his office as a bedroom.

Denava and I shared the second bedroom as roommates. It was an uncomfortable arrangement but we could both see the humor in it. We both wanted the thing we had started and never finished. We both kept hoping it would start again. But we both wanted the real thing. Neither one of us wanted to pretend.

Nento phoned me several times during the next couple of tendays. Sori had placed a block on her calls, so I wasn't even aware she was still interested. Four tendays after we arrived on Mars, Sori told me he thought I should call her.

"Do you really think that's wise, doctor?" I said.

"Trust me, my son."

The woman who answered the phone had a softer, rounder face, like the original Nento I had seen in the pictures Sori had shown me. She had thinner lips than the Nento in the picture and her hair had been gathered into a braid that hung down her back. She still used the sideward look but she lowered her head when she did it. She spoke in short, slow phrases and her voice never rose above a murmur.

She wasn't the Nento who had attracted me and she wasn't the original Nento either. She insisted she was still thinking about me but it was obvious she was just reciting lines.

"They've remodeled her again," Sori said. "I guess they decided it could be a profitable technique, even if it didn't work with you. Most of their victims won't have somebody like me hovering in the background."

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Can you mourn for someone who never existed? I was sharing a bedroom with a woman who possessed almost all the qualities Nento had pretended to have and I still found myself moping around like I'd lost everything I'd ever wanted.

"It's ridiculous," I said. "I haven't lost a thing. She never was. And yet she's got a stronger hold on me than half the real women I've been in love with."

"Feelings are feelings," Denava said. "You've spent your life obeying an irrational impulse. It's part of your charm."

"I can't believe I'm spending my life running from woman to woman just because none of them matches some ideal I'm stuck with. That isn't it. That's never been it."

"So what are you doing?"

"It's the variety that fascinates me. You're all different. Every one of you."

"So sooner or later you'd have grown tired of her, too."

"Sooner or later someone else *attracts* me. It isn't the same thing."

Denava had opted for the cello when she had installed her performance system. I spent a little money and bought a program that reproduced one of Amati's finest. It was a perfect companion for the new copy of my Amati violin that I ran off soon after we settled into our quarters. We played together for two or three hours every day. We even got in some ensemble playing with the half dozen Martians who felt they could indulge in such activities. Eventually—inevitably—there came a day when I looked at her across the strings of my instrument and we both knew her grave, controlled personality had once again touched my flightier temperament.

We spent over two eyears together. A full Martian year. Then the dance of life spun me toward a biological designer who was working with the faction that was planning the terraforming of Mars, if terraforming ever became the approved policy. The biological designer was followed by a physiological psychologist, the psychologist was followed by a life support engineer, and Sori's prophecy proved to be true. Mars was a very pleasant world for someone with my disposition.

Still, I left it after seven eyears. For all its pleasures, it had a flaw that troubled my happiest hours. On all the worlds where people live underground, the public spaces are decorated with panoramic screens that show you the landscape you would see if you were looking through a real window. In every café and public area on Mars, day or night, you can contemplate the Martian hills and the Martian sky. Three times a day, if you happen to be near a screen at the right time, you can see an astronomical object which orbits the planet every 7.7 hours, at a distance of 10,000 kilometers. It's a small object, and not very bright. But I never learned to ignore it. ○

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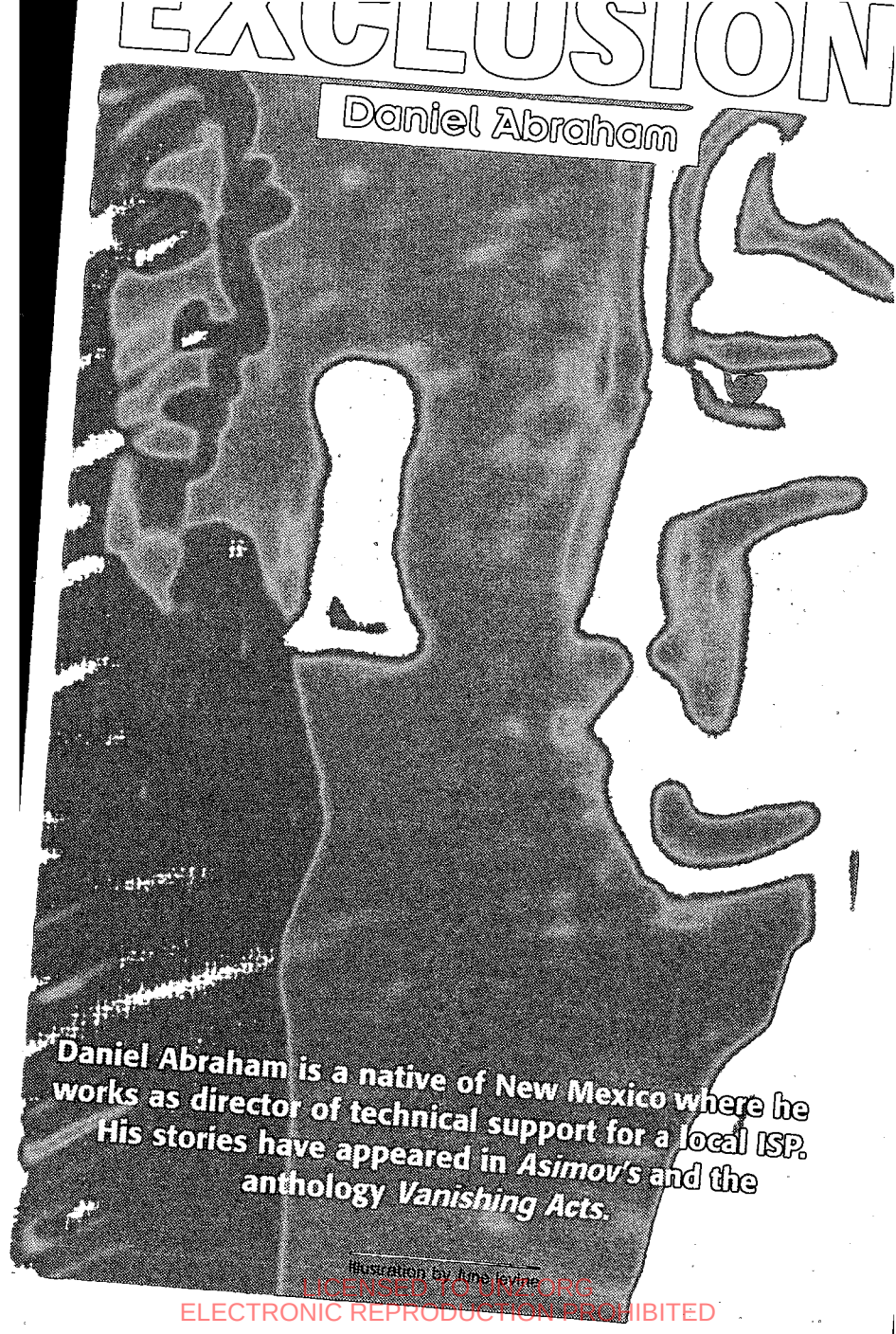
EXCLUSION

Daniel Abraham



Daniel Abraham is a native of New Mexico where he works as director of technical support for a local ISP. His stories have appeared in *Asimov's* and the anthology *Vanishing Acts*.

Illustration by Anne Levine

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t's a simple question," his brother said. "What if you had and nobody came?"

Eliot nodded absently, noticing the way the sound of the rain mixed with the hum of conversation, the way the cool of the streets and the ırmth of the coffeehouse were both present. He thumbed up the tempera-re on his coffee cup, opting for warm over cold.

"Annet Kyrios did something like it last year," Cristof continued, brushing ng bangs absently out of his eyes. "Hers were African genocides in the)80s, I'm using the German Jews. But the questions were pretty much the ame. Wire everyone with systems a few hundred years early, give them the ption of editing perceptions and how does the economy react, how much buse do populations consent to before you start seeing massive exclusions, vhere does the conflict stabilize, what level of scapegoating starts to feed)ack against itself? You run it through the models and see what exactly :hanges when you include system-mediated consciousness."

Cristof waved his hand in a gesture like a seagull flapping, long delicate fingers much like Eliot's own. Eliot pulled his attention back to Cristof, the blue eyes and black hair their parents had liked so much that all the sibs wore it like a trademark. His brother shrugged. It was like seeing a very slow mirror that had caught the shifting of his own shoulders ten years earlier and was only now reflecting it for him.

"So," Cristof said, sarcasm slipping comfortably into his tone, "since you find ancient history so *stunningly* fascinating, I take it you didn't ask me here to talk about the fine points of my thesis, ne?"

"I'm sorry," he said. "I *was* listening. The Jews, the Africans. Consent and exclusion."

"Nice to know you get so much with half an ear," Cristof said, and drank from his own cup—a sugary hot tea that smelled to Eliot like a children's drink. "So spill it. What's the pebble in your shoe?"

"It's Tania," he said.

"Oh, El . . ."

"I can't . . . *stop,*" he said. "I know. I know. I should let go of it. But . . ."

"How long has she been gone?" Cristof asked.

"Almost two months," Eliot said. "I was at Yen Ching the other night. The little Korean restaurant I used to take her to."

"I remember the place," Cristof said. "Greasy."

"There was a man on the other side of the place. I thought at first he was waiting for someone and practicing things to say. You know, talking to himself. Then I realized . . ."

"It probably wasn't her," Cristof said.

The table chimed and offered them refills on the coffee. Cristof thumbed in an order for a crepe.

"I followed him to the bathroom," Eliot said. "I was going to ask him if it was her. If he'd talk to her for me."

Cristof snorted and rolled his eyes.

"What are you *thinking,* El? How many people have you got on *your* exclude list?"

"I don't know. Twenty. Twenty-five."

"So the chances it was her are, what? Five percent? Not even counting anyone else who might have excluded you besides Tania."

"That's not the point," Eliot said, impatient. "It's just an illustration. The way she left . . . it's eating at me. I need to talk to her."

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"How? By going up to men in bathrooms and saying 'Hi, I think you may be with someone who's decided she doesn't want anything to do with me. Would you please disrespect her wishes on my behalf?' If it's *that* important, go to an intercessionist."

"I can't. We don't have any kids or joint property. There's no reason for someone to take the case professionally. That's why I wanted to talk to you."

The comment hung in the air so long the table asked if they wanted to see a news feed.

"You want *me* to step in?" Cristof asked, incredulous. "Keep dreaming, El. She'll just exclude me, too. What's the point of that?"

"Try?" he asked, looking hard at the eyes that were so much like his own. "For me, will you *try*?"

Cristof shook his head, and, for a long moment, Eliot thought that he would refuse. Then he sighed, air hissing out from between his teeth, just the way their father had done it when he'd been talked into something against his better judgment.

"Thank you, Cristof," Eliot said.

"You should just let her go," his brother said.

"I know. But thank you, all the same." Dessert arrived, carried by a pretty brunette. Cristof thanked her elaborately, but she left unimpressed. Eliot stole a bite of the crepe.

"So," Eliot said. "Tell me. What changes if the Jews can exclude the Nazis?"

"Same thing that always changes," Cristof said. "Everything."

They'd met through mutual friends, going to the same parties, chatting in the same background groups. Tania was lovely. A few years older than him, but with only the faintest touch of gray at her temples. Her body was just imperfect enough to forgive Eliot his failings, her laugh was just rich enough to intrigue him. They'd started making comments to each other privately through their systems, slowly creating a shared vocabulary that was the basis of their affair.

She started coming over to his place—a little organic five minutes by express subway outside the city—for dinner, and then started staying for the night. Her clothes began to inhabit his closet. She never stopped paying rent on her apartment in the city, but her plants there died from neglect.

Eliot styled the organic after the American Southwest. The grown-coral corners hadn't been sharpened, only covered with stucco. She had appreciated the soft feeling it gave the space. She'd liked the recessed "kiva-style" seating area in the main room and the rugs woven in Amerind styles that hung on the wall. He hadn't changed things since she'd left, though he thought it might have been healthier if he'd done so.

It had hardly been a fight. Had hardly been *anything*. And yet still, somehow, it had been the end.

They had been growing apart a little, Eliot thought, but no more than anyone did. They had been seeing each other for three months, making love like teenagers, staying up too late, going in to work with bright smiles and circles under their eyes. And that faded, but that wasn't wrong. That always fades.

She had just come back from a week-long conference in London, tired from the trip and cranky. He'd been waiting for her with wine and candlelight, but he knew from the way she dropped her bag that she saw his advances as another responsibility, something else she had to do.

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Okay, he said. Too sharply? Had his disappointment leaked through? *That's fine.*

Eliot . . .

He'd snuffed out the candles, taken the wine back into the kitchen and corked the bottle.

What do you want from me? she demanded. *What?*

Nothing, he said.

Something had passed over her face as she stood in the kitchen doorway, some expression that spoke of emotions he couldn't fathom. Her mouth softened, but her eyes had seemed to grow more distant, as if she were already looking through him, already unable to see him. That expression haunted him. Anger? Hurt? Regret? And if there had been regret, did that mean there was still hope now?

Because whatever she'd felt in that instant, in the next—she excluded him. Her eyes had flickered, gone unfocussed as her system edited him out of her perception, and then less than a heartbeat later his system synchronized. He'd stood, gaping in surprise at the empty air where she'd been. He'd yelled, but, of course, she hadn't heard. He'd contacted her system and left messages she never received, never even knew existed. He didn't notice when exactly she left the organic, only because he was *unable* to.

She was gone, unreachable. She was in a different universe, one that didn't include him any more. His friends might see her, might chat with her. His brother might plead his case. But unless she relented, he would be dead to her, a cipher. Something left entirely behind. He would never know if it was *his* fault.

In the darkness, the rain still pattered against the windows. Eliot sat, listening to it and sipping a beer. The house stood ready to deliver any number of distractions and entertainments, but the rain and alcohol seemed too appropriate.

He tried to wait a decent amount of time, tried not to push. However much he put it off, though, he knew his brother would still feel the same way about it. Their father's sigh hissing through his teeth.

"Cristof?" Eliot said to the darkness.

"Yes?" Cristof said, the traffic sound and the voices of his cooperative student housing in the city coming in behind him like a constant nearby party or a distant riot.

"How goes?" Eliot asked.

"You remember the old jokes about there being two history departments?"

"Everybody in one excluded everybody in the other," Eliot said, repeating the legend.

"Well, it looks like it may be coming true. Something's happened that has all the knives out. My advisor isn't accepting connections from students until tomorrow, and she was *supposed* to give me a list of revisions for my abstract."

Eliot rubbed his eyes.

"Did you talk to Tania?" he asked.

A low sigh snaked through the darkness. He could see Cristof's eyes rolling as clearly as if they'd had screens on.

"Yes," Cristof said at last. "I did. And really, El, you're better off without her. She's completely unreasonable."

"What did she say? Will she see me?"

"She said she'd listen to your apology on one condition," Cristof said. "You

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have to make peace with everyone on *your* exclude list. No exclusions for no exclusions."

Eliot frowned, "Why that?" he said.

"She's saying *no,* El," Cristof said, impatient and snapping. "She's saying she doesn't want to talk to you. Let it go."

"You're right," Eliot said. "You're right. I should."

"Ah, reason dawns at last!" Cristof said. "I'm sorry, El. I wish it had worked out. But you'll find someone else. Don't let it bother you. It'll pass."

"I know it will," Eliot lied into the darkness.

"Anyway, she was a bitch."

"Do you know why *that* was what she picked? I mean, did she say why that was the condition?"

"No," Cristof said. "I don't know. She just said it."

There was a stuttering tone, Cristof's system telling him someone was trying to break into the link.

"I'll go," Eliot said. "Talk to you later, eh?"

"Lunch next week?" Cristof asked.

"Sure. See you then," Eliot said, and broke the link.

The rain was letting up now, the sound of the drops softer, the thunder more distant. Eliot had his system link to the house, turn up the lights and start a shower. He walked to the bedroom—hardwood floors, brown stucco walls—and stripped between sips of his drink.

She would listen to his apology, Cristof said. His *apology*. So whatever it was, it was his fault after all. He'd hoped . . . hoped that maybe it had been something else. That he hadn't driven her away. That it wasn't *his fault*. It would have been easier that way, somehow. He left his glass empty at the bedside.

The shower had been smaller before, hardly more than a stall. He'd had the house regrow it after Tania moved in, widening it at the expense of a storage closet. It was luxurious now, with two nozzles that still sprayed the fine mist that she'd preferred. It smelled of the cedar lotion she'd used. He could imagine her there beside him, could see her wet, black hair against her skin.

"System," he said. "How many people are on my exclude list?"

"Twenty-two," the system reported in its soft, carefully asex voice.

"List them."

He let the water run over him as the system murmured the names of his enemies, the people he'd cut out of his world, never to see them or speak with them again. Each name was like another stone in his belly as his understanding grew of how bad the next few days would be.

The first person he'd ever excluded was Margaret Huo, in his second year of school. She had accused him of stealing her pen, which he had. The teacher had made him return it in full view of the class, with his parents and sibs present via system link. He had excluded her the next day, and cajoled his two best friends into doing the same as a show of support.

After work, he sat in the recessed seating, the windows open behind him, thinking of her and trying to remember her face. A sandy-haired girl with almond-shaped eyes. He tried to age her face, thicken it. He tried to imagine twenty-five years softening the barely remembered skin, tugging at the eyes and mouth. He found that he couldn't. The only image that he could conjure was of the child he had known briefly, and he was probably remembering *that* wrong, too.

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He'd changed into a casual sweater, a royal blue that went well with his eyes. He had the system set up a screen. He breathed in deep and slow, and then, silently, without moving, he removed the exclusion.

When he opened his eyes, nothing had changed, except that his world had one more person in it now than had been in it a moment before.

"System, request link with Margaret Huo."

There were probably hundreds of matches for the name, Eliot reflected. A legion of Margaret Huos related only by the coincidence of common names. But his system knew what he wanted from context, and silently made the link.

She was sitting at a rough wooden table, wearing a simple, well-cut cotton dress, a cup of tea in her hand. Behind her, the pale light of impending dawn glowed through a window. Eliot was surprised by how little she had changed, and then, an instant later, by how much.

"Margaret Huo?" Eliot asked.

"Yes," she said, politely but firmly. "But I'm afraid that, whatever it is, I'm not interested. Please take me off your call list, and . . ."

"No, I'm not selling anything. I'm looking for *you*. I'm Eliot Mikos. We were in second-year school together. Ms. Teller's class."

Margaret put down her teacup and looked more carefully at him. A single vertical crease appeared between her brows.

"Yes . . ." she said, a slow smile blooming on her features. "You stole my pen and excluded me."

"Yes," Eliot said. "That was me. That's the reason why I was looking for you, actually. I wanted to apologize."

Her smile shifted, turned quizzical. Eliot found that he was clenching his fists on his knees, and forced the fingers to relax.

"For excluding me, or stealing my pen?" she asked.

"Either," Eliot said. "Both. Whatever seems appropriate."

Margaret nodded thoughtfully and picked up her tea, sipping it. She nodded.

"I forgive you for taking my pen and dropping out of my universe. Looking back, I can't say it changed my life much one way or another."

"Thank you," Eliot said.

"If you'd like to tell me what this is all about, though . . ."

Eliot shook his head, laughing a little.

"It's a long story. And I don't know that it would make sense."

She nodded. Behind her, the sunlight grew suddenly brighter, as if a cloud had passed.

"I'm afraid you've caught me just before work," she said. "No time for long stories. Perhaps we'll run into each other some time, just by chance, and you can tell me then."

"I guess we might," Eliot agreed, then paused. "Thank you."

"You're welcome," she said. "Good luck, Eliot Mikos. With whatever it is. I have to say, you make an interesting beginning to a morning."

He nodded, and she broke the link. The screen went grey, his own ghostly reflection looking back out at him.

That was one. Twenty-one to go.

The second person he'd ever excluded was Dustin Liria. It was in fifth year, and at the time, Dustin had been trying to break his ribs by kicking them. Remembering the incident now, Eliot wasn't entirely sure how to approach it. He sighed and took the exclusion off. Perhaps something would occur to him.

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He removed four of the people from his list that night. When he went into the office in the morning, a package had arrived for him. An enameled blue pen, heavy and smooth, with no message.

"Jihad! Holy war! The whole department is acting like two different hills of ants put in the same jar and shaken."

Cristof tapped his fingertips nervously on the table. There were dark circles under his eyes, the kind that Eliot remembered from the mirror in his own student days. Nights spent drinking and talking and seducing that turned into mornings of hot coffee and dark circles under the eyes. But Eliot's memories didn't involve the same paleness of the cheeks, the haunted sound in Cristof's voice, as if he were speaking from a long way off.

Cristof's room was small, close and dark, one of a suite of seven that shared a kitchen and communal bath. Two of the other six were in the kitchen, arguing about something Eliot couldn't follow. The whole place smelled of marijuana and cheap incense.

"It's this new thesis. Mikel Tinos. Did I tell you about him?"

"He's the one who came over from political science, ne?"

"Him," Cristof agreed. One of the pair in the kitchen slammed a metal pot into the sink with a crash that hurt Eliot's ears. He winced. Cristof noticed, looked surprised for a second, then laughed.

"Oh," Cristof said apologetically. "Are the terrible two at it again?"

"Sorry?" Eliot said, disconcerted. "What?"

"I excluded them both last week," Cristof said. "They started fucking, and ever since, the place has been unlivable with them in it. Come on, let's go elsewhere, eh?"

Eliot stood. Cristof shrugged on a jacket, and led the way out. The terrible two glared at Eliot as he left, though not, of course, at Cristof.

The campus had changed, the same buildings regrown in the latest style of old stone and antiquity. The effect would almost have convinced Eliot if he hadn't seen them in shining and spartan neo-African designs only a few years before. He and his brother walked side by side across the quad, scattering the pigeons before them.

"He's turned the models around. He's running the '73 elections *without* exclusion and saying the reform party would have rounded up the liberal left and slaughtered them!"

"Ah," Eliot said. "Isn't the department chair . . ."

"Reformist," Cristof said. "He took it very poorly. But the grant money comes from a liberal left foundation. The chair tried to kill the project, Tinos called his backers and they threatened to pull funding."

Cristof made a gesture like throwing confetti to the wind, and laughed.

They stopped at a street café just off the campus proper. A street musician stood by the door, sawing out popular tunes on an ancient violin. Cristof led the way to a dark corner, where he thumbed in an order without looking. Eliot took a moment, searching for something decent in the glowing list of options, before making his choice. By tacit agreement, Eliot was the one who offered payment.

"Imagine living without our systems filtering the world for us," Eliot said as a pretty young man brought their drinks. "Going back to when you *couldn't* walk away, no matter how bad it got."

"Has its drawbacks if you're liberal left, apparently," Cristof said dryly.

"Yes, well. Still, it would have made *my* last week easier," Eliot said, not

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meeting his brother's eyes. "I started with old ones. From when I was young. They weren't so bad. But some of these people I stopped talking to for a *reason*."

The door of the café swung open and closed as a woman came in, the cheap violin music swelling and growing faint. Cristof shook his head.

"It just would have been better to take care of it all at the time, you know?" Eliot continued. "When it was still fresh. But then, I suppose Tania wouldn't have me in this position at all, if that was how it was."

"Oh, Jesus God, El. You mean you're actually . . ."

Eliot felt his smile turn thin, but he held it. Raising his eyebrows, he spoke to the table in front of his brother's chest.

"I knew you wouldn't approve. But you'll see—when you get older, that walking away gets . . . harder. There isn't as much *time* as there was when I was young. There aren't as many people who . . ."

Cristof put down his cup of sweet tea with a dull thud.

"Eliot. Please don't do this. Please."

Cristof's expression had become even more drawn than it had been a moment before. Eliot shifted his shoulders. When he spoke, his voice was harsher than he'd intended.

"It's *my* dignity, brother, not yours," Eliot said. "I'll spend it where I think it needs spending."

His brother shrank back from the words, and Eliot regretted them immediately.

"I have to *know*," Eliot said. "I just have to know."

The rest of the meal was strained and uncomfortable, and Eliot spent the remainder of the day trying to shake a feeling of loneliness that had stolen over him, as if somehow he was losing his brother too.

It was difficult to smile, but he did his best.

"Amends?" Ariana pouted. "You want to make *amends?*"

"I just want to clean up some of the loose ends in my life," Eliot said, knowing as he did that the words sounded like a warning not to expect much. Knowing that Ariana would only take it as a dare to raise the stakes.

"I don't know," Ariana said in that near baby-talk voice that made his flesh crawl. "It really hurt my feelings when you didn't want to talk to me. Ten years is a long time to make *amends* for."

"Ari," Eliot said, raising a placating hand. "It was six years, and . . ."

"Eliot," Tania said. "We need to talk."

Her voice was low and calm, but hearing it unexpectedly filled his bloodstream with a rush of adrenaline, as if he'd been startled by a sudden gunshot. He had never taken her off his system's privileged access.

"Ari," he said, as calmly as he could. "I've got to take this. I'll get right back with you."

Before she could reply, he broke the connection and Tania appeared on the screen. Her dark, serious eyes met his with an expression that he couldn't read. He put his hands in his lap, lacing his fingers together to keep them from trembling.

"Tania," he said. "I didn't think I'd hear from you so soon. Cristof said . . ."

"Yes," she broke in. "Yes, your brother's been saying a lot of things. That's why we need to talk. I've been getting panicky messages from him for three days now. I excluded him at first, but then he started in on my parents."

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"I've been going through my exclude list," Eliot said. "Just the way you asked me to. I've still got six left to go . . . well, maybe seven . . ."

"Eliot, you don't think I would *really* do that, do you?"

Eliot paused for a beat.

"Excuse me?" he heard himself say.

"I would never do that to you! Never ask you to do something like that. Cristof thought you'd let go of me if you thought I was being unreasonable. When you called, he'd been talking to someone about some scheme where people couldn't exclude each other. It was the first thing that came to his mind. But it isn't true. It was never true. He never even spoke to me. I never asked him to have you do that."

Tears filled her eyes and her lips grew thin and bloodless. For a moment, Eliot felt dizzy, as if he was looking down from a great height. He felt a smile creep onto his face, the sick smile of a man in extremis. When he spoke, somehow he kept his voice under control.

"I didn't know what to think," he said. "I didn't know why you wanted me to do that. I didn't know why you left me in the first place. I thought I must have done something wrong."

"I know. I'm sorry. It was wrong of me. I should have talked to you about it, but it seemed so much easier to just make a clean break. No fighting, no recriminations. I would just vanish from your world forever."

He tried to speak, but his throat had gone tight. Tania looked down. It struck him that she'd started parting her hair on the left. The fact had a clarity and incongruity that he associated with trauma, like noticing a crack in the sidewalk in the moment just before your face smashed into it.

"We weren't working out," she said. "I thought you knew it too. But I didn't want to fight with you, and it seemed easier to just go along with it. There was never a good time to talk. And then . . . when I met someone else . . . it still didn't seem like a good time."

"Ah," Eliot said. The knot in his chest released, and the sorrow behind it swelled up into his throat and eyes. "I see."

"You didn't do anything wrong," she said. "It just *ended*. You don't owe me any kind of apology. I'm sorry that Cristof made up all that stuff about . . ."

Eliot held up his hand, palm out. Tania, with her lovely mouth, her midnight eyes, went silent.

"I understand," he said. "Thank you for calling."

"Eliot . . ." she began.

"Thank you," he said again. "Thank you for calling."

He broke the link, and the screen went black. Pain filled his chest and throat like a tumor, forcing him to breathe in sips. Every time he thought it was almost over, her face on the screen came back, and the pain broke over him again.

He had gotten as far as his bed, but not as far as taking off his clothes, when Ariana requested a link. He excluded her and rolled onto his side, clutching a pillow.

Cristof sat in the quad, smoking with four other students. Eliot could tell by the slope of his brother's shoulders that he was tired. Quietly, he walked up from behind.

"I'm not arguing for it," Cristof was saying as Eliot stepped up. "I'm only saying that we shouldn't discount it. If the model does apply. . . ."

Eliot put his hand on Cristof's shoulder. Cristof turned and went pale.

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"Excuse us," Eliot said to Cristof's companions. He turned and walked toward the old auditorium. Cristof fell into step beside him. The air was cool, a late cold snap, one last breath of winter.

Eliot angled their path across a wide quad. An old practice auditorium stood at the edge of the campus, little changed by architectural shifts and fashions. Cristof walked in silence, hands pressed deep into his pockets. Eliot didn't speak either.

The hall was in use. Voices rose in the difficult passages of song, fell away to mutterings, and then rose again. Eliot, still wordless, walked to a side lobby, apart from the main entrance. He sat on an old red velvet chair and motioned for Cristof to take a seat beside him.

They sat in silence for a long moment. Eliot took a heavy blue pen from his jacket pocket.

"You want me to start?" Eliot asked.

Cristof blinked, frowned, shook his head slowly.

"No," his brother said, leaning forward and clasping his hands. "No, I'll do it."

"Okay," Eliot said.

"I was wrong," Cristof said. "I . . . I thought that it would be easiest for you just to let go of her, and I thought I could help you do that."

"So you lied."

"So I lied," Cristof agreed. "It was stupid. But I did it. And then, when you started actually going *through* with it, which I never thought you'd actually *do,* I tracked her down and told her about what was going on. Did she talk to you?"

"Yes," Eliot said.

"Do you feel better now?"

Eliot frowned, considering. The blue enamel pen caught the light like a shard of sky.

"No, not really," Eliot said. "But I will. And that's about the best I can do at this point. Did it ever strike you as condescending to decide *you* know what I should and shouldn't do with my life better than I do?"

"You mean, *before* the fact?" Cristof said, and despite his discomfort, gave a wry little laugh. "No. The last week, I've been over the point in detail, though. I wanted to apologize. I would have, but I was afraid to link to your system. I thought, you know, that you might have excluded me."

"I did, for a while," Eliot said.

Cristof looked up, his face drawn.

"I took it off again," Eliot said.

A woman sang three notes of a falling trill, the sound echoing in the air. Cristof shifted in his chair.

"Forgive me?" Cristof asked, his voice quiet, dreading, hopeful.

"No," Eliot said. "I tried to, but . . . no, I *don't.* I don't trust you right now, Cristof. I feel betrayed. I don't understand how you could treat me like that. You made all this a lot harder than it should have been. And it was bad enough to start with."

"I'm sorry," Cristof whispered.

"I know," Eliot said.

"Don't go!" Cristof said, desperation in his voice. "Look, El, I know I've been a shit, but please don't put me on your exclusion list. Give me a chance and I'll make it up to you. I swear to God. . . ."

Eliot hushed him gently and put the pen back into his pocket.

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"It's okay," Eliot said. "I'm not going anywhere. I promise."

"I'm sorry I screwed up," Cristof said.

"We'll deal with it," Eliot said. "Give it time, we'll deal with it. I just went through the list of just about everyone I never wanted to talk to again, and most of the time . . . did Tania tell you why she did it? When you talked to her?"

Cristof shook his head.

"Because it was more *convenient* for her. Easier than having a hard conversation with me. Easier than working it out."

"I'm sorry. . . ." Cristof began.

"It doesn't matter," Eliot continued. "The important thing is that I did the *same thing* to all the people *I* excluded. Cut them out and gave up on actually *solving* anything. I'm just as bad as her. I let all those people be dead to me, because it was easier at the time. I don't want that anymore."

They were both silent for a long moment. Behind them, music began to fill the cold, winter air.

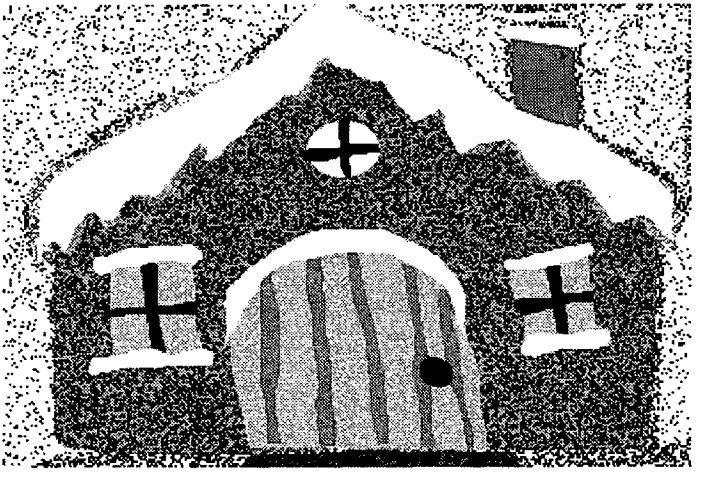
"And anyway," Eliot said, "you're my brother."

Cristof sat forward. His hand was warm on Eliot's wrist. For a moment they sat, holding hands like children. O

WEEKEND COTTAGE IN THE WOODS

Perfect for single
person—fine old gingerbread
carving—large oven.

—Ruth Berman



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USER-CENTRIC

Bruce Sterling

The author tells us he's recently "been spending a lot of time hanging out with industrial designers. My latest novel is called *Zeitgeist* (Bantam), and is pretty much business as usual: Turkish smugglers, pop stars, and Russian mafiosi."

From: Team Coordinator
To: "Design Team" (the Engineer, the Graphic Designer, the Legal Expert, the Marketer, the Programmer, the Social Anthropologist, and the Team Coordinator)
Subject: New Product Brainstorming Session

Another new product launch. Well, we all know what that means. Nobody ever said that they're easy. But I do believe the seven of us—given our unique backgrounds and our proven skills—are just the people to turn things around for this company.

Things aren't as bad as the last quarterly report makes them look. There are bright spots there. Despite what the shareholders may think, we've definitely bottomed out from that ultrasonic cleanser debacle. Sales in muscle-gel apps remain strong.

Plus, the buzz on our new product category just couldn't be hotter. People across our industry agree that locator tag microtechnology is a killer app in the intelligent-environment market. MEMS tech is finally out of the lab and bursting into the marketplace, and our cross-licenses and patents look very solid. As for the development budget—well, this is the biggest new-product budget I've seen in eight years with this company.

My point is—we have *got* to get away from our old-fashioned emphasis on "technology for tech's sake." That approach is killing us in the modern marketplace. Yes, of course MEMS locator chips are a "hot, sweet" technology—and yes, "If you build it, they will come." Our problem is, we *do* build it, and they do come, but they *give all the money to somebody else.*

We can't live on our reputation as a cutting-edge engineering outfit. Design awards just don't pay the bills. That's not what our shareholders want, and it's not what the new management wants. No matter how we may grumble, this company has got to be competitive in the real world. That means that it's all about Return-on-Investment. It's about meeting consumer demand, and generating serious revenue. That means it's *not* centered on the wonder-gizmo any more. It's centered on broadening and deepening our relationship with the end-user.

So let's not start with the product qua product. For the time being, forget the sheet-metal chassis, and the injection-molded plastic shell. We're not going to do it that way, this time.

It's not about selling the user a cardboard box with a sexy label and some hardware that's shrinkwrapped in styro blocks. Forget that tired commodity approach. We need to get into service and support, where the big money

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is, in today's highly networked Experience Economy. Our product is not a "commodity" any more, and the consumer is not a "user." The product is *a point of entry for the buyer into a long-term, rewarding relationship.*

So what we require here, people, is *a story.* That story has got to be a *human* story. It has to be a user-centric story—it's got to center on the user himself. It's all about the consumer. The guy who's opening his wallet and paying up. The guy who's the basic stakeholder in our product line.

In fact, I don't even want to hear that old-fashioned word "user" any more. I want us to put that mindset completely behind us. I want this character, this so-called "user," to be a *real person* with some *real human needs.* I want to know *who he is,* and *what we're doing for him,* and *why he's giving us money.*

So we've got to know what he needs, what he wants. What he longs for, what he hopes for, what he's scared of. All about him.

If we understand him and his motivations, then we also understand our product. I want to know what we can do for this guy in his real life. How can we mold his thinking? How do we persuade him to engage with the product? What useful design role do we have in his world?

So I want this Team to brainstorm this new story. Don't be shy—come right out with whatever works for you, no matter how wild it might seem at first.

There'll be plenty of time for us to be critical later in the process. The point now is to get the story rolling, to break the concept open for the Team. We have the funding. We've got the talent and experience. We just need the confidence to push our imagination into new creative spaces. So let's all just pitch right in, shall we? Let's roll with it, let's do it!

From: Product Engineer
To: Design Team
Subject: Re: New Product Brainstorming Session

FYI, User specs: Classic early adapter type. Male. Technically proficient. 18-35 age demographic. NAFTA/Europe. Owns lots of trackable, high-value-added, mobile hardware products: sporting goods, laptops, bicycles, luggage, possibly several cars.

From: The Marketer
To: Design Team
Subject: user specs

I just read the Engineer's email, and gee whiz, people. That is dullsville. That is marketing poison. Do you have any idea how burned out the Male-Early-Adapter thing is in today's competitive environment? These guys have got digital toothbrushes now. They're nerd-burned, they've been consumer-carpet-bombed! There's nothing left of their demographic! They're hiding in blacked-out closets hoping their shoes will stop paging their belt buckles.

Nerds can't push this product into the high-volume category that we need for a breakeven. We need a *house-keeping technology.* I mean ultra-high volume, in the realm of soaps, mops, brooms, scrubbing brushes, latex gloves, light bulbs. An impulse buy, but high-margin and all over the place.

From: The Programmer
To: Design Team
Subject: (no subject)

I can't believe I agree with the Marketer::

But really, I'd rather be dipped in crumbs and deep-fried::

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Than grind out code for some lamer chip::
That tells you where your lawnmower is.::
I mean, if you don't know by now::
READ THE FRIENDLY MANUAL.::
Know what I'm saying here?::
I mean, how stupid are people out there supposed to be?::
Don't answer that.::
Jeez.

From: the social anthropologist
To: Design Team
Subject: creating our narrative model of reality
People, forgive me for this, but I don't think you quite grasp what Fred, our esteemed Team Leader, is suggesting to us approach-wise. We need a solid story *before* we consider the specs on the technical MacGuffin. A story just works better that way.

So: we need a compelling character. In fact, I feel that we need *two* characters. One for the early-adoption contingent who appreciates technical sweetness, and the other who is our potential mass-market household user. To put a human face on them right away, I would suggest we call them "Al" and "Zelda."

"Al" is a young man with disposable income who lives in a rather complex household. (Perhaps he inherited it.) Al's not really at ease with his situation as it stands—all those heirlooms, antiques, expensive furniture, kitchenware, lawn-care devices—it's all just a little out of his control. Given Al's modern education, Al sees a laptop or desktop as his natural means of control over a complex situation. Al wants his things together and neat, and accessible, and searchable, and orderly—just the way they are on his computer screen.

But what Al really needs is an understanding, experienced, high-tech housekeeper. That's where "Zelda" comes into the story. Zelda's in today's 65+ demographic, elderly but very vigorous, with some life-extension health issues. Zelda has smart pill-bottles that remind her of all her times and her dosages. She's got cognitive blood-brain inhalers, and smart orthopedic shoes. Zelda wears the customary, elder-demographic, biomaintenance wrist-monitor. So I see Zelda as very up-to-speed with biomedical tech—so that her innate late-adapter conservatism has a weak spot that we might exploit.

Is this approach working for the Team?

From: Team Coordinator
To: Design Team
Subject: Now We're Talking!
The Social Anthropologist is with the story here! Right, that's just what we want: *specificity.* We're building a technology designed for "Al" and "Zelda." Our Team has got to *understand* these two characters—who are they, what do they need? How can we exceed their consumer expectations, make them go "Wow"?

And one other little thing—I'm not the "Team Leader." I mean, it's nice of Susan to say that, but my proper title is "Coordinator," and the new CEO insists on that across all teams and divisions.

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From: The Graphic Designer
To: Design Team
Subject: I'm telling the story

Okay, well, maybe it's just me, but I'm getting a kind of vibe from this guy "Albert." I'm thinking he's maybe, like, a hunter? Because I see him as, like, outdoors a lot? More than you'd think for a geek, anyway. Okay?

From: The Engineer
To: Design Team
Subject: Story Time

Okay, I can play that way, too. "Albert Huddleston." He's, like, the quiet type, good with his hands. Not a big talker. Doesn't read much. Not, like, a ladies' man. But he's great at home repair. He's got the big house and he's out in the big yard a lot of the time, with big trees, maybe a garden. A deer rifle wouldn't scare him. He could tie trout flies, if he was in the mood.

From: The Marketer
To: Design Team
Subject: the consumables within Al's demographic

Lathes, paintbrushes, ladders, plumbing tools. A bow saw, an extendible pruner. Closet full of high-performance extreme-sports equipment that Al used in college and can't bear to get rid of.

From: The Graphic Designer
To: Design Team
Subject: What is Albert really like?

So he's, like, maybe, a Cognition-Science major with a minor in environmental issues?

From: The Marketer
To: Design Team
Subject: Re: What is Albert really like?

Albert's not smart enough to be a "cognition science major."

From: The Legal Expert
To: Design Team
Subject: so-called Cognition Science

In a lot of schools, "Cognition Science" is just the Philosophy Department in drag.

From: Team Coordinator
To: Design Team
Subject: Brainstorming

It's great to see you pitching in, Legal Expert, but let's not get too critical while the big, loose ideas are still flowing.

From: Legal Expert
To: Design Team Subject:
Subject: Critical Legal Implications

Well, excuse me for living. Forgive me for pointing out the obvious, but there are massive legal issues with this proposed technology. We're talking about embedding hundreds of fingernail-sized radio-chirping MEMS chips

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that emit real-time data on the location and the condition of everything you own. That's a potential Orwell situation. It could violate every digital-privacy statute on the books.

Let's just suppose, hypothetically, that you walk out with some guy's chip-infested fountain pen. You don't even know the thing has been bugged. So if the plaintiff's got enough bandwidth and big enough receivers, he can map you and all your movements, for as long as you carry the thing.

There are huge corporate-responsibility issues here. Those legal issues have to come first in the design process. It just isn't prudent to tack on anti-liability safeguards, somewhere down at the far end of the assembly line.

From: The Engineer
To: Design Team
Subject: correction

We don't use "assembly lines." Those went out with the twentieth century.

From: The Marketer
To: Design Team
Subject: getting sued

Wait a minute. Isn't product-liability exactly what blew us out of the water with the ultrasonic cleanser?

From: the social anthropologist
To: Design Team
Subject: the issues we face together as a group

There are plenty of major issues here, no one's denying that. In terms of the story though—I'm very intrigued by the Legal Expert's suggestions. I mean—there seems to be an unexamined assumption here that a household control technology is necessarily "private." But what if it's just the opposite?

If Al has the location and condition of all his possessions cybernetically tracked and tagged in real time, maybe Al is freed from *worrying about all his stuff.* Why should Al fret about his possessions any more? We've made them permanently safe. For instance, why shouldn't Al loan the lawnmower to his neighbor? Al's neighbor can't lose the lawnmower, he can't sell it, he can't steal it, because Al's embedded MEMS monitors just won't allow that behavior.

So now Al can be *far more generous* to his neighbor. Instead of being miserly and geeky—"labeling everything he possesses," obsessed with possessiveness and privacy—Al turns out to be an open-handed, open-hearted, very popular guy. Al probably doesn't even have locks on his doors any more. Al doesn't need locks! Everything Al has is automatically theft-proof—thanks to us.

I see Al throwing big house parties. Al is fearlessly showing off his home and his possessions. Everything that was once a personal burden to Al becomes a benefit to the neighborhood community. What was once Al's weakness and anxiety is now a source of emotional strength and community esteem for Al.

From: Team Coordinator
To: Design Team
Subject: Wow

Right! That's it. That's what we're looking for. That's the "Wow" factor.

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From: the Graphic Designer
To: Design Team
Subject: Re: Wow

Okay! So here's how Al meets Zelda. Cause she's, like, living next door? And there's, like, a bunch of Al's dinner plates in her house, kind of "borrowed"? And somebody breaks a plate, and there's an immediate screen prompt, and Al rushes over, and there's Zelda. She dropped a plate and broke it.

From: the Legal Expert
To: Design Team
Subject: domestic disputes

Someone *threw* a plate at Zelda. Zelda owns the home next door, and her son and daughter-in-law are living in it. But Zelda's sold the home, because she needs to finance her rejuvenation treatments. It's a basic cross-generational equity issue. Happens all the time nowadays, with the boom in life-extension.

Granny Zelda comes home from the clinic looking thirty-five. She's mortgaged all the family wealth, and now the next generation can't afford to have kids. The daughter-in-law is freaked because the mother-in-law suddenly looks better than she does. The family has a soap-opera eruption of passion, resentment and greed. This kind of thing makes a child-custody case look like a traffic ticket.

From: The Engineer
To: Design Team
Subject: implications

Great. So listen. Zelda sells her house and moves in with Al next door. Al is a nice guy, he's generous, he's rescuing her from her family soap-opera. Now Zelda brings in all her own stuff into Al's house, too. Sixty years' worth of Zelda's tschotschkes.

But that's not a problem at all. Thanks to us. Because Al and Zelda are getting everything out of her packing boxes, and tagging it all with our MEMS tags. Their household possessions are all mixed up physically—and yet they're totally separate, virtually. Thanks to MEMS tags, unskilled labor can come into the house with a handheld tracker, and separate and repack everything in a few hours, tops. Al and Zelda never lose track of who belongs to what—that's a benefit we're supplying. Al and Zelda can live together in a new kind of way.

From: the Graphic Designer
To: Design Team
Subject: A&Z living together

Okay, so Zelda's in the house doing some cooking, right? Now Al can get to that yardwork he's been putting off. There's like squirrels and raccoons and out there in the yard, and they're getting in the attic? Only now Al's got some cybernetic live-traps, like the MuscleGel MistNet (™) from our Outdoor Products Division. Al catches the raccoon, and he plants a MEMS chip *under the animal's skin.* Now he always knows where the raccoon is! It's like, Al hears this spooky noise in the attic, he goes up in the attic with his handheld, it's like, "Okay Rocky, I know it's you! And I know exactly where you're hiding, too. Get the hell out of my insulation."

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From: the Legal Expert
To: Design Team
Subject: tagging raccoons

That's very interesting. If Al really does track and catalog a raccoon, that makes the raccoon a property improvement. If Al ever wants to sell the house, he's got a market advantage. After all, Al's property comes with big trees, that's obvious, that's a given—but now it also comes with a legally verifiable raccoon.

From: the Engineer
To: Design Team
Subject: squirrels

They're no longer vermin. The squirrels in the trees, I mean. They're a wholly owned property asset.

From: Team Coordinator
To: Design Team
Subject: This Is Real Progress, People

I'm with this approach! See, we never would have thought of the raccoon angle if we'd concentrated on the product as a product. But *of course* Al is moving his control-chips out of the house, into his lawn, and eventually into the whole neighborhood. Raccoons wander around all the time. So do domestic dogs and cats. But that's not a bug in our tracking technology—that's a feature. Al's cat has got a MEMS tag on its collar. Al can tag every cat's collar in the whole neighborhood, and run it as a neighborhood service off his webpage. When you're calling Kitty in for supper, you just email Kitty's collar.

From: the Programmer
To: Design Team
Subject: (no subject)

AWESOME!::
I am so with this!::
I got eight cats myself::
I want this product!::
I can smell the future here!::
And it smells like a winner!!::

From: the Engineer
To: Design Team
Subject: current chip technology

That subcutaneous ID chip is a proven technology. They've been doing that for lab rats for years now. I could have a patent-free working model out of our Sunnyvale fab plant in forty-eight hours, tops.

The only problem Al faces is repeater technology, so he can cover the neighborhood with his radio locators. But a repeater net is a system administration issue. That's a classic, tie-in, service-provision opportunity. We're talking some long-term contracts here, and a big buyer lock-in factor.

From: the Marketer
To: Design Team
Subject: buyer lock-in factor

That is hot! Of course! It's about consumer stickiness through market-segmentation upgrades. You've got the bottom-level, introductory, Household-

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Only tagging model. Then the mid-level Neighborhood model. Then, on to the Gold and Platinum service levels, with twenty-four hour tech support! Al can saturate the whole suburb. Maybe even the whole city! It's totally open-ended. We can supply as many tags and as much monitoring and connectivity as the guy is willing to pay for. The only limit is the size of his wallet!

From: Team Coordinator
To: the Social Anthropologist
Subject: *****Private message*****

Susan, look at 'em go! I can't believe the story-telling approach works so well. Last week they were hanging around the lab with long faces, preparing their résumés and emailing head-hunters.

To: the Team Coordinator
From: the social anthropologist
Subject: Re: *****Private message*****

Fred, people have been telling each other stories since we were hominids around campfires in Africa. It's a very basic human cognition thing, really.

From: Team Coordinator
To: the Social Anthropologist
Subject: ****Private Message Again****

We're gonna have a hit, Susan. I can feel it. I need a drink after all this, don't you? Let's go out and celebrate. On my tab, okay? We'll make a night of it.

From: the social anthropologist
To: the Team Coordinator
Subject: our relationship

Fred, I'm not going to deny that there was chemistry between us. But I really have to question whether that's appropriate business behavior.

From: Team Coordinator
To: the Social Anthropologist
Subject: ****Private Message****

We're grown-ups, Susan. We've both been around the block a few times. Come on, you don't have to be this way.

From: the social anthropologist
To: Team Coordinator
Re: ****private message****

Fred, it's not like this upsets me professionally—I mean, not in that oh-so-proper way. I'm a trained anthropologist. They train us to understand how societies work—not how to make people happy. I'm being very objective about this situation. I don't hold it against you. I know that I'm relationship poison, Fred. I've never made a man happy in my whole life.

From: Team Coordinator
To: the Social Anthropologist
Subject: ****Very Private Message***

Please don't be that way, Susan. That "you and me" business, I mean. I thought we'd progressed past that by now. We could just have a friendly cocktail down at Les Deux Magots. This story isn't about "you and me."

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From: the social anthropologist
To: the Team Coordinator
Subject: Your Unacceptable Answer

Then whose story is it, Fred? If this isn't our story, then whose story is it?

* * *

Albert's mouth was dry. His head was swimming. He really had to knock it off with those cognition enhancers—especially after eight PM. The smart drugs had been a major help in college—all those French philosophy texts, my God, Kant 301, that wasn't the kind of text that a guy could breeze through without serious neurochemical assistance—but he'd overdone it. Now he ate the pills just to keep up with the dyslexia syndrome—and the pills made him so, well, *verbal.* Lots of voices inside the head. Voices in the darkness. Bits and pieces arguing. Weird debates. He had a headful of yakking chemical drama.

Another ripping snore came out of Hazel. Hazel had the shape of a zaftig 1940's swimsuit model, and the ear-nose-and-throat lining of a sixty-seven-year-old crone. And what the hell was it with those hundred-year-old F. Scott Fitzgerald novels? Those pink ballet slippers. And the insistence on calling herself "Zelda."

Huddleston pulled himself quietly out of the bed. He lurched into the master bathroom, which alertly switched itself on as he entered. His hair was snow-white, his face a road-map of hard wear. The epidermal mask was tearing loose a bit, down at the shaving line at the base of his neck. He was a twenty-five-year-old man who went out on hot dates with his own roommate. He posed as Zelda's fictional "seventy-year-old escort." When they were out in clubs and restaurants, he always passed as Zelda's sugar-daddy.

That was the way the two of them had finally clicked as a couple, somehow. The way to make the relationship work out. Al had become a stranger in his own life. Al now knew straight-out, intimately, what it really meant to be old. Al knew how to pass for old. Because his girlfriend was old. He watched forms of media that were demographically targeted for old people, with their deafened ears, cloudy eyes, permanent dyspepsia, and fading grip-strength. Al was technologically jet-lagged out of the entire normal human aging process. He could visit "his seventies" the way somebody else might buy a ticket and visit "France."

Getting Hazel, or rather "Zelda," to come across in the bedroom—the term "ambivalence" didn't begin to capture his feelings on that subject. It was all about fingernail-on-glass sexual tension and weird time-traveling flirtation mannerisms. There was something so irreparable about it. It was a massive transgressive rupture in the primal fabric of human relationships.

Not "love." A different arrangement. A romance with no historical precedent, all beta pre-release, an early-adapter thing, all shakeout, with a million bugs and periodic crashes. It wasn't love, it was "evol." It was "elvo." Albert was in elvo with the curvaceous bright-eyed babe who had once been the kindly senior citizen next door.

At least he wasn't like his Dad. Stone dead of overwork on the stairsteps of his mansion, in a monster house with a monster coronary. And with three dead marriages: Mom One, Mom Two, and Mom Three. Mom One had the kid and the child support. Mom Two got the first house and the alimony. Mom Three was still trying to break the will.

How in hell had life become like this? thought Huddleston in a loud interior voice, as he ritually peeled dead pseudoskin from a mirrored face that,

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even in the dope-etched neural midnight of his posthuman soul, looked harmless and perfectly trustworthy. He couldn't lie to himself about it—because he was a philosophy major, he formally despised all forms of cheesiness and phoniness. He was here because he enjoyed it. Because it was working out for him. Because it met his needs. He'd been a confused kid with emotional issues, but he was so *together* now.

He had to give Zelda all due credit—the woman was a positive genius at home economics. A household maintenance whiz. Zelda was totally down with Al's ambitious tagging project. Everything in its place with a place for everything. Every single shelf and windowsill was spic and span. Al and Zelda would leaf through design catalogs together, in taut little moments of genuine bonding.

Zelda was enthralled with the new decor scheme. Zelda clung to her household makeover projects like a drowning woman grabbing life-rings. Al had to admit it: she'd been totally right about the stark necessity for new curtains. The lamp thing—Zelda had amazing taste in lamps. You couldn't ask for a better garden-party hostess: the canapés, the Japanese lacquer trays, crystal swizzle sticks, stackable designer porch chairs, Chateau Neuf du Pape, stuff Al had never heard of, stuff he wouldn't have learned about for fifty years. Such great, cool stuff.

Zelda was his high-maintenance girl. A fixer-upper. Like a part-time wife, sort of kind of, but requiring extensive repair work. A good-looking gal with a brand new wardrobe, whose calcium-depleted skeletal system was slowly unhinging and required a lots of hands-on footrubs and devoted spinal adjustment. It was a shame about her sterility thing. But let's face it, who needed children? Zelda had children. She couldn't stand 'em.

What Al really wanted—what he'd give absolutely anything for—was somebody, something, somewhere, somehow, who would give him a genuine *grip*. To become a fully realized, fully authentic human being. He had this private vision, a true philosophy almost: Albert "Owl" Huddleston, as a truly decent person. Honest, helpful, forthright, moral. A modern philosopher. A friend to mankind. It was that Gesamtkunstwerk thing. No loose ends at all. No ragged bleeding bits. The Total Work of Design.

Completely *put together,* Al thought, carefully flushing his face down the toilet. A stranger in his own life, maybe, sure, granted, but so what, so were most people—even a lame antimaterialist like Henry Thoreau knew that much. A tad dyslexic, didn't read all that much, stutters a little when he forgets his neuroceuticals, listens to books on tape about Italian design theory, maybe a tad obsessive-compulsive about the seven-hundred dollar broom, and the ultra-high-tech mop with the chemical taggant system that Displays Household Germs in Real Time © (TM). . . . But so what.

So what. So what is the real story here? Is Al a totally together guy, on top and in charge, cleverly shaping his own destiny through a wise choice of tools, concepts, and approaches? Or is Al a soulless figment of a hyperactive market, pieced together like a shattered mirror from a million little impacts of brute consumerism? Is Al his own man entire, or is Al a piece of flotsam in the churning surf of techno-revolution? Probably both and neither. With the gratifying knowledge that it's All Completely Temporary Anyway ©. Technological Innovation Is an Activity, Not An Achievement.(TM).(SM) Living on the Edge Is Never Comfortable.®

What if the story wasn't about design after all? What if it wasn't about your physical engagement with the manufactured world, your civilized

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niche in historical development, your mastery of consumer trends, your studied elevation of your own good taste, and your hands-on struggle with a universe of distributed, pervasive, and ubiquitous smart objects, that are choreographed in invisible, dynamic, interactive systems. All based, with fiendish computer-assisted human cleverness, in lightness, dematerialization, brutally rapid product cycles, steady iterative improvement, renewability, and fantastic access and abundance. What if all of that was at best a passing thing. A by-blow. A techie spin-off. A phase. What if the story was all about this, instead: What if you tried your level best to be a real-life, fully true human being, and it just plain couldn't work? It wasn't even possible. Period.

Zelda stirred and opened her glamorous eyes. "Is everything clean?"

"Yeah."

"Is it all put away?"

"Yep."

"Did you have another nightmare?"

"Uh. No. Sure. Kinda. Don't call them 'nightmares,' okay? I just thought I'd . . . you know . . . boot up and check out the neighborhood."

Zelda sat up in bed, tugging at the printed satin sheet. "There are no more solutions," Zelda said. "You know that, don't you? There are no happy endings. Because there are no endings. There are only ways to cope." O

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THE MAN WHO WAS SING SING

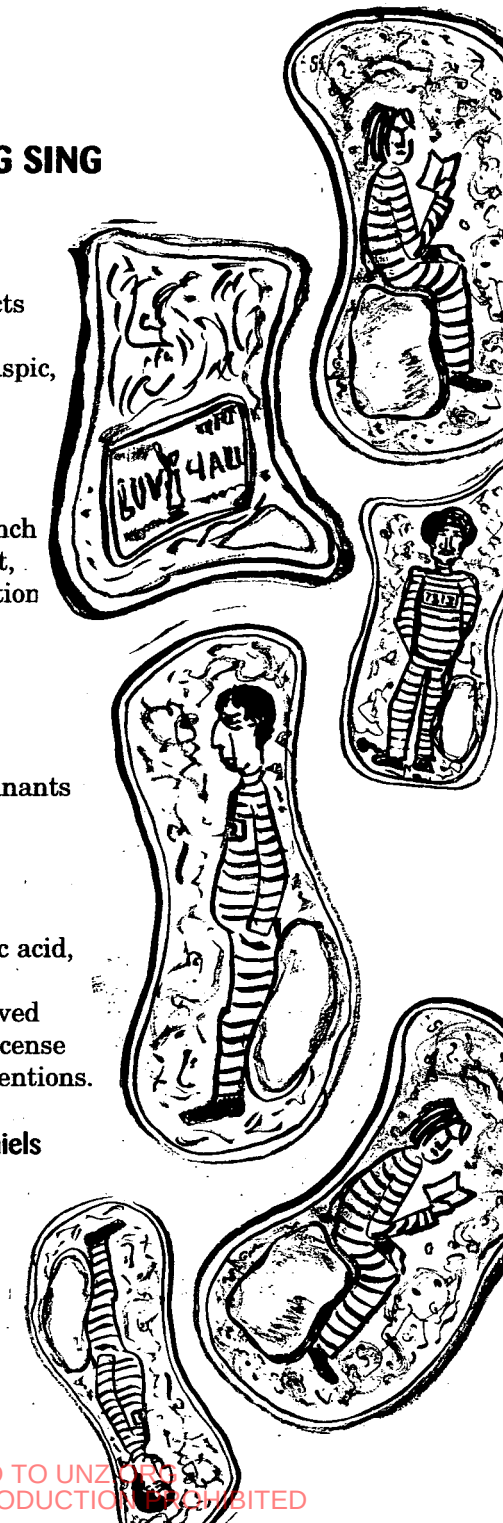
When it came to him suddenly
that he was the largest prison
in the universe, with tiny convicts
incarcerated in the cytoplasm
of his myriad cells like eggs in aspic,
his thoughts became suicidal—

for how could he justify
paying room and board for all
the galaxy's miscreants? A staunch
proponent of capital punishment,
he quietly arranged their execution
by committing suicide.

But he had to be careful, lest
the little buggers escape
in a bowel movement, or spring
themselves from his rotting remnants
to infiltrate the water table
and savage the ecosystem.

So he flung himself into a vat
of fuming nitric and hydrofluoric acid,
where everything—flesh, hair,
bones and implants—was dissolved
without a trace. Even the tiny license
plates that spelled out God's intentions.

—Keith Allen Daniels



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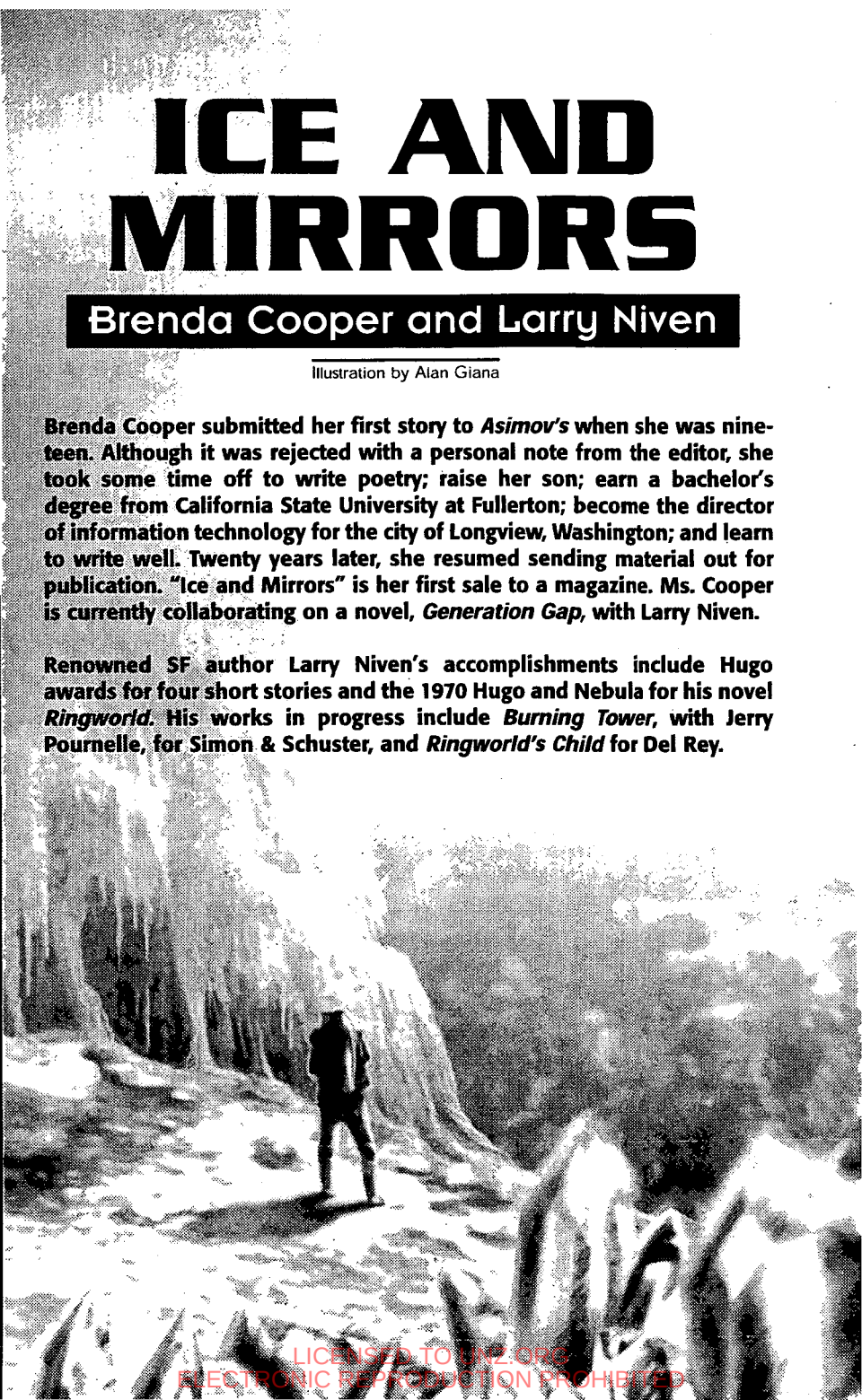
ICE AND MIRRORS

Brenda Cooper and Larry Niven

Illustration by Alan Giana

Brenda Cooper submitted her first story to *Asimov's* when she was nineteen. Although it was rejected with a personal note from the editor, she took some time off to write poetry; raise her son; earn a bachelor's degree from California State University at Fullerton; become the director of information technology for the city of Longview, Washington; and learn to write well. Twenty years later, she resumed sending material out for publication. "Ice and Mirrors" is her first sale to a magazine. Ms. Cooper is currently collaborating on a novel, *Generation Gap*, with Larry Niven.

Renowned SF author Larry Niven's accomplishments include Hugo awards for four short stories and the 1970 Hugo and Nebula for his novel *Ringworld*. His works in progress include *Burning Tower*, with Jerry Pournelle, for Simon & Schuster, and *Ringworld's Child* for Del Rey.



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Ice crunched under her boots, loud in the still silence. Trine's harsh sunlight reflected from a world of multifaceted ice and mineral crystals, surrounding her with rainbows. She was too exhausted to appreciate the display . . . but hey, it *was* pretty. Dark blue sky, brilliant sun, even through her Blue Blockers: awesome. What would it really take to warm this world?

She shivered. Hunger was finally getting to her. She hadn't been so cold the first few nights. Just alone. She was the only human on a planet surrounded by enemies; it left her very small and far away from home. She felt daggers of ice on her neck; the scarf and the parka's collar kept shifting. Should she have kept the pressure suit?

The blazing sun touched the horizon and was gone.

Kimber tilted her head to the darkening sky. The lights of the Thray starship should be visible soon. She leaned back against a slab of rock rising out of the ice. After a moment, she settled her backpack between her feet. It had to be kept close. She would die for what was in it, unless Eric found her first.

Would that surprise the Thray? They'd certainly surprised *her!* What had these aliens known of Kimber Walker when they chose her to bring to Trine?

The cafeteria at the Institute for Planetary Ecological Surveys was completely full. Graduating students milled about, competed for seats, shared laps when there were none, and moved nervously between groups. Kimber struggled to wait quietly with her best friends. There were four off-planet assignments available to a graduating class of over thirty students. Kimber feared getting stuck at the Institute as a teaching assistant or grant grunt. The last year had been *hard;* she'd fallen from third place to middle of the class.

Competing students had turned in psych profiles and agonized over resumes. They could have waited anywhere on campus. Most of them chose company and coffee.

Two of the three open surveys would take one student each. Those students would join groups of more experienced human surveyors doing spot checks on inhabited planets. One was a water world; the other was held by entities who lived beneath desert sand. The third survey would take two students as the only human members of a joint expedition with the Thray, an older star-faring race. The Thray planned to terraform and then inhabit Trine, a currently unclaimed world.

There was a hierarchy among species with interstellar capability. The United Nations was trying hard to buy or lease the secret of the Shift Trick, but none of Earth's visitors would even discuss the subject. Humans might join alien enterprises, riding spacecraft with interstellar capability. The Thray had ships that used the Shift Trick; but somewhere above them were unseen entities who enforced interstellar law.

The Thray could not approve their own occupation of a new planet. A neutral race must support any new planetary real estate deals. The Thray had drawn humans by lot. They would choose a survey leader and assistant surveyor from the graduating class.

Look the place over, then sign off on the Thray occupation. It sounded simple enough, but *interstellar flight!* A *whole new world!*

A frozen world to be reshaped. Thray had played tourist on Earth, always under wide-brimmed hats, with a dark glass hemisphere over each eye, ex-

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cept when they were exploring Earth's caverns. They would want a world like Earth. How would they go about making it?

One day humanity would be doing this.

Kimber's heart was set on the assistant job. It was the least of the off-planet assignments, but better by far than staying home. After six years she was desperate to test herself in the field.

The room was silent as results were read. The water planet went to Aaron Hunter of Hawaii. He groaned. Aaron was an amazing diver and swimmer, but he had developed a surfer's ear problem: mushy hearing, loss of balance. The sophonts were sea dwellers. Aaron would be living underwater . . . but Kimber knew he'd take the job.

The sand dwellers went to Wendy Lillian, the best of them at languages. Eric Keenen got the assistant position for the coveted job with the Thray, and actually had the bad grace to look disappointed. First in the class all the way through, he had been expecting the lead on that team.

Kimber's heart sank. She twisted her black hair around her index finger, grimaced as some of it caught in her rings. She stood up to leave, hoping her disappointment didn't show. She almost tripped at the sound of her name.

"Kimber Walker, Trine, Chief Surveyor."

She jumped, somehow tangling her hand further in her hair so she yelped. It was only when her friends Julia and Rick congratulated her that the job began to seem real.

Eric Keenen glared at her.

She'd be going down to the surface of a new world. Eric would fly between the stars, but it was unlikely he'd make planetfall. He wasn't the type to take that with good grace. She and Eric had fought each other throughout school after a bad relationship in her freshman year, but she had hardly seen him all semester.

It was a problem, but not enough to ruin her elation. That night, far from sleep, she watched the stars from her window until they faded to dawn.

The next month passed quickly, filled with finals and ceremonies, goodbyes, and planning for the survey. She and Eric saw each other regularly as they completed plans, but always in the company of the advisor, Dr. Janice Richardson.

Star Surveyor II was the cabin and cargo section of a Space Shuttle affixed to the flat face of a massive silver cylinder with no breaks in it at all, no rocket nozzles, airlocks or access hatches, no windows or antennae or sensing devices, *nothing*. The Shuttle overlapped the edges a bit, like a cat fallen asleep on a hatbox. Dr. Richardson's office had a display wall, and the Shuttle/Wayfarer Basic assembly lived there for two weeks. Richardson could pull close-ups; she could set the pilot's display as a virtual flight test.

Kimber believed that *Star Surveyor II* was an embarrassment to Dr. Richardson.

"We can't get into the Wayfarer Basic module. Contract says we don't even think about it," she said. "We didn't even link up the Shuttle components. The Pillbugs did that, and they build the Wayfarer Basic too. But we can fly it."

"Show me," Eric said. And as she lectured, he questioned, argued, speculated, demanded. In Janice Richardson's presence Eric was loquacious. He never addressed Kimber directly.

"Communications. Are we talking just to the Thray?"

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"By no means! Eventually, you'll send your results." A view of the lower floor of the Shuttle cabin. "We fitted the Verification Link module into two of the locker spaces. It connects to the Wayfarer Basic—the hatbox. You'll have a variety of sensing devices; we've labeled the sockets.

"But you, Eric, *you* don't communicate results. I was told there's no clear limit on what data you can store or request, so record *everything* in *every* interesting frequency. Make notes and speculations and complaints. You'll keep and organize the samples and data Kimber gathers from Trine, what both of you discover using the VL. The Link gives you access to the libraries of a hundred species, instantaneous information, if you can learn to use it. But you're barred from sending messages except library search queries."

Eric looked away, dark eyes fixed pointlessly on a spot where two struts joined. Kimber watched his rigid back while Dr. Richardson ignored him and continued.

"Kimber, you're the Chief Surveyor. Listen to Eric, but keep the decision yours. Only you can send results via the VL, and you only send *once*. You send all the data that might be pertinent, and your own verdict. *Go* or *No Go*. If you don't get a response, the only thing you can do is send the same message again." Dr. Richardson paused, looked them both in the eye. "Or a standard low level SOS."

Eric asked, "They don't like to be bothered?"

Shrug. "Traffic across a galaxy, individuals in the trillions or higher . . . Eric, Kimber, how easy is it for a novice or a hacker to mess up just the Internet? You've the regular low-level access to query the libraries and you can talk to the Thray all you want, but no other traffic, not even with us. We asked. There's a special one-time code that lets you send survey results. Now, we don't know where that message goes, or how. The Pillbugs, you've seen them, right? They're the source of the VL and the Wayfarer modules and a lot more. We think they're working for some other entity, some species at the Dyson Sphere level . . . but that's not my field."

Pillbugs were two and a half feet long and always came in groups. The workers she'd seen had hard-shelled back plates of silver armor that would lock when they rolled up. At any drop in pressure, a Pillbug could seal itself against vacuum and await rescue. Kimber had seen a dozen Pillbug workers do that at a loud noise.

While Richardson was instructing him on how to fly, Eric glanced aside just once. *Kimber, are you picking up on this?* But he still wouldn't speak to Kimber. In later days he flew the virtual controls whenever Dr. Richardson was out of the office. If Kimber wanted to fly, he gave her the pilot's seat and went elsewhere.

The day before take-off, it changed. He became so insistent about little things in the supply loading process that Kimber had to pull rank to make the final choices. The ensuing argument caused Professor Richardson to step in and deliver a lecture on chain of command and respect for commanders.

Star Surveyor II did not quite belong to Freedom Station. The aliens called Pillbugs *leased* them the Wayfarer Basic. They could reclaim it with ten months' notice. Without it the partial Shuttle was junk.

But Kimber had flown it virtually, and Eric flew it better. Let the politicians worry about contracts with civilizations they didn't understand yet—Kimber wanted stars and space.

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They didn't bother with gravity assists, complicated orbits, or finicky burns. Those days were gone. Eric just aimed away from the sun and *left*. The greatest moment of her life, *their* lives, passed in choppy formalisms and silence.

The second morning they sat together on the flight deck under half a gravity of thrust, with a glorious view of stars and two tiny crescents. Eric presently made coffee—a complicated procedure because the coffeemaker was designed to work in microgravity—and brought Kimber a cup. He said, "Captain?"

"I thought I'd have your job, not mine," Kimber said.

"I know. So did I. After all, Kimber, what jobs have you been responsible for?"

"You could look it up." He had done that, of course. None.

"Doc Richardson thought I might manage this too, but the last night she reminded me Thray aren't human. They might look at different characteristics than we would when choosing leaders."

"Or teams." Kimber reached for the right words. "It's not like we got along in school. I hated it when you dumped Julie last year. It hurt her feelings a lot—"

"She pretend—"

"—Or me, years ago."

"Didn't you—"

"But that aside, whether I expected to lead or not, I've got to now. Eric, if you were me, you wouldn't turn it down, you'd do your best. As yesterday's grads, we've all got names to make. Reputations. I intend to succeed."

"I'm behind you, Captain. Mission oriented. But Kimber, something doesn't feel right."

"Beside me having the lead?"

"That too."

"Well, all I feel is excited." She sat at the small table and sipped carefully at the hot coffee: a major concession on his part, and she'd better drink it! "Now, let's review today's task list and see if it changes as we talk."

For nine days *Star Surveyor II* was under thrust. The ship didn't require much of Eric's attention. Accommodations were roomy, and over the years students had added some modern amenities.

They played with the alien telescope, getting used to it, zooming in on a handful of known asteroids, then amazing views of Saturn, Io, the tiny base on Titan.

Eric didn't talk much. Kimber knew why. She wouldn't raise *that* subject again.

The Verification Link filled two locker spaces on the Shuttle's lower floor. It was an almost-cube with a big hole in the middle. Filigree ran along the rims. Some of that was plugs for cameras and recorders and such. Some was hardwired buttons that would summon a variety of virtual keyboards. Some might be only decoration.

The hole in the middle was half a meter across. It bore the curled DON'T TOUCH symbol that all the interstellar species seemed to use, that looked *just* enough like a proofreader's delete sign. There was a sense of optical illusion to the hole, as if it were deeper than the Shuttle hull. "Resonance cavity," Dr. Richardson had called it, for no obvious reason. "*Sure* it's been in-

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vestigated. *No,* I don't know what was done or what was found. *You* don't touch the RC." Or BH (Big Hole, Eric's term).

Eric played obsessively with the Verification Link. Kimber had seen him in this state. In his freshman year, computer games had dropped him a full grade point before she'd talked him around. Now he was playing for higher stakes, for all the knowledge in the universe.

When Eric could tear himself away, Kimber took his place.

The VL set connected to a number of "libraries." One was the Smithsonian Institute in Washington, DC. Others circled other stars. She found translation errors, misaddresses, and when she finally got something right there were floods of information more likely to drown her than inform her. How did Eric stand it?

She found she could connect to the Thray ship *Thembrlish*. Kimber used the Verification Link to exchange pleasantries with Althared. Althared had served as an ambassador's aide to the United Nations; he had been at the Institute to choose the Trine verification team; but *Thembrlish* had never been near Sol system. The ship would meet them at Trinestar. It was currently light years away.

Althared gave her an access code to the Thray home world library. Eric watched over her shoulder as she tried it out. It was murderously difficult. Thray had evolved as cave dwellers, and learned to expand and brace and carve their caves into vast city-sized networks. It affected every aspect of the way they thought. They loved the underground warrens of the Mars colony; they'd offered to help out. They'd terraformed a world in their own system. Trine would be their first interstellar project.

There was no way to test her link to the Overlord . . . or Overlord species, or Council of Species, or Overlord artificial intelligence program . . . the source of laws that even interstellar civilizations must obey. Kimber was to use the VL to reach that level only once. So much isolation made her uneasy.

Around Uranus' orbital distance, but nowhere near Uranus, Eric prepared to do the Shift Trick. Kimber made him wait until she could use the Verification Link to speak to Althared. She was in conversation with the alien when Eric made his move. When the stars around *Star Surveyor II* swirled and vanished, Althared's display—and Althared—never even blinked.

Kimber waited for the stars' return. If she was tense, Eric looked ready to *lunge* at his instruments. He didn't move, he didn't *breathe*. And there they were, a billion white dots sprayed across the Shuttle windows, one very bright. Trinestar, Trine's sun.

Eric said, "I'd sell myself into slavery to know how that works."

Then it was only a matter of moving inward, shedding velocity at half a G, staying above Trinestar's ecliptic plane. Trinestar kept a dense, dangerous asteroid belt. Those resources would make Trine more valuable, and maybe easier to terraform.

Trine was a frozen world, a white dot becoming a white pearl. *Star Surveyor II* was in orbit before texture began to show. Heights and depths, a topography as rough as Earth's done in glare white and black shadow. The tops of mountains thrust through icy swirls of white like dark pearls on a linen cloth. A gaudy egg-shaped Christmas ornament passed below, painted in fractals, white and iridescent red with huge curved windows in odd shapes. The *Thembrlish.* Drifting, gone.

Free fall didn't bother Kimber when she could hold the right mindset. She

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was not falling, she told herself. She was floating. Floating, looking down like a goddess on her world; and her world was good. Fifteen minutes passed before she stretched and reached for her pocket sec' to dictate some sub-vocal notes.

Eric drifted forward. Kimber didn't stop him, didn't even speak to him. She was bored with his reserved distance.

The Thray ship drifted back . . . oh, of course. Eric was matching course. A tube snaked out of the white-and-crimson sphere and fumbled about until it lipped the Shuttle airlock.

Regulations required one of them to stay on board. Eric looked resentful as Kimber left him and went into the Thray ship.

She walked through a maze of twisty passages not much wider than her outspread arms, keeping to the gold carpet. Gold marked her path, and marked out gravity. If she left that path she'd be falling. Thray drifted past her, facile in free fall, ignoring her but never brushing her. Armor covered them, not pressure suits, just protection. Their joints bent oddly; otherwise they might almost have been human. She saw only half a dozen crew before the corridor suddenly ballooned out.

Thembrlish's viewing deck was so huge that *Star Surveyor II* would fit inside and leave room for seats along the wall. She followed the golden strip around, and bowed to her Thray contact.

Althared's face glowed with a milky white translucence. Veins of blue liquid moved just under the skin and pulsed through the darker blue of his mouth. Large almond shaped eyes were inset deeply on each side of his head. When he bowed, he turned his head left, his right eye holding hers. Then he stepped forward, took her hand, placed his other hand on the small of her back and turned her and jumped.

He had big hands, long and fragile fingers. His hand covered most of her back. She couldn't help thinking of a tarantula, and falling distracted her. She flinched violently before she got herself under control.

Althared didn't seem to notice. He turned her so they looked out on the patterned whites and grays of Trine in a floor-to-ceiling window. Althared spoke softly, his voice audible only through the translator at his throat.

"It was once a green planet. We intend to make it so again."

"How?"

"It would warm itself in a million years. We will not wait. We will reflect sunlight down onto the surface from a hundred thousand klicks around. We will pour heat onto the planet until the ice melts. Even as little as we like cold, we believe we can live near the equator in less than a hundred years. Most of the land mass is there. We will begin as soon as we get your positive report." He gestured, and a hologram of Trine appeared in front of them, superimposed on the image of the real planet in the window. As it rotated, she saw the ice pull back slowly, then faster, until continents and seas emerged between two great caps of ice. "This, Kimber, is our goal. Your survey will clear us to start down that road. A base camp has been prepared. We made maps in anticipation of your arrival."

"My world has been like this," Kimber said. "Twice." Eric had told her that. Suddenly she wished she had listened more carefully.

"Early in its evolution, I expect." Althared wasn't interested.

The map was still up. The roughness under Trine's white blanket, lines of mountain ridge, clearly shaped one large and two smaller land masses, all near the equator, leaving vast white curves north and south.

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Her thoughts caught up. Training told Kimber to choose the base camp. She grimaced, then asked, "Where did you put us?"

She didn't see Althared's hand move, but the map zoomed on a white nothing, well north of the equator. Two red dots became domes painted red and black, like the pattern that marked *Thembrlish* itself. They squatted in a sprawl of temporary roads, white on white. Kimber blinked.

"Althared? Did you put the base camp on an *ocean?*"

"Yes, that must once have been an ocean. It made an easy landing field."

"But what can you possibly expect us to *learn* there?"

"Here and here are islands not far below the ice. Peaks protrude here. No? Then choose a place. We will move the camp."

Irregularities sprawled along the equator, touches of shadow under the ice. Two big continental masses, narrowly separated, reaching no more than fifteen degrees north and twenty south. A third mass, far west and much smaller, still equatorial. A handful of islands further north. They'd have Thray names . . . would they? Kimber tagged them. *Blotch* was the size of Asia or larger. Internal magma flows had stretched the next largest mass like taffy, she thought, giving it the curve of an integral sign. Black mountain peaks followed the spine. *Integra*, she called it. The shadow shaped like nothing in particular, she called *Iceland*. What the hell, she could change it later.

Kimber pointed at near random, below a black ridge of mountain peaks, Integra's spine. "There."

"Direct overhead sunlight on such a vastness of ice might hurt your vision. Too much of this world's atmosphere has frozen out. The sunlight is not thinned."

She looked at Althared's profile. It never showed anything at all. She'd been told that the human face evolved to convey messages; it was not so for other species.

"I brought blue blocker glasses," she said.

"Moving camp will cost us perhaps thirty hours. Return to your ship."

"You're back?"

Kimber sounded defensive even to herself. "They put our base camp in the middle of an ocean!"

"Show me."

"What was I supposed to *find?*"

"Mmm."

"So they're moving the camp."

"Where? Show me." He'd forgotten who was in charge again, but at least he was talking. "That looks mountainous. Was it your pick?"

"Yes. Why?"

"Oh, I'd have . . . here." He pointed at the center of a sketchy Y, white on white, hard to see. "Might be two rivers converging. The point is, you picked it."

"Eric, I told Althared that the Earth has been frozen twice. *You* told me that, didn't you? Years ago? Frozen right across the equator, pole to pole, you said."

He grinned. "I thought you'd stopped listening."

"I didn't stop listening. I stopped helping you do your homework when I had my own courses. But is it still true? Since the aliens came, the facts change pretty fast."

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"They sure do. Captain, do you see where the continents lie? Right along the equator?"

"Yes."

"What we used to know, what *every* geologist *knew*, was that the Earth has a stable state. Ice Ages come and Ice Ages go, but if we ever froze all the way, the albedo, the Earth's reflective index, would shoot up near a hundred percent. We'd still be getting sunlight, but it would all bounce off the ice, right back to space. We'd be frozen forever."

"Uh huh."

"We *knew* this, like we once knew that continents don't move. Then some geologists found evidence that Earth *was* frozen. Twice. The record is in the rocks, but what they knew was crazy. If the Earth was all one glittering icy pearl, how would it ever warm up?"

Kimber speculated. "The sun could flare, if you wait long enough. Or a giant meteoroid impact?"

"Twice? Oh, all right, but try this. You know that carbon dioxide is a greenhouse gas?"

"Sure, and water vapor too."

He waved it off. "Water vapor freezes out in an Ice Age. Rock absorbs carbon dioxide by making limestone. But if you cover whole continents with ice, you've covered the rocks. Limestone formation stops, carbon dioxide builds up, heat gets trapped, and that's how an Ice Age ends."

"Oh. *Oh*. What if the continents are all on the equator?"

"Yes! Yes, Captain." Was it *that* startling, that she should have an insight? "On Earth it was all one continent then, but it's the same with Trine, the ice cover is nearly complete before limestone production slows down. Now the only question is, how are the Thray going to warm it?"

"Sunlight," she said. "Mirrors. From a hundred thousand kilometers around, Althared said."

"Ten-to-the-fifth klicks radius? That's . . . Kimber, it's pi times ten-to-the-tenth, that's thirty billion square klicks of mirror."

She shrugged.

"Kimber, how do you talk to a Thray?"

"Althared is the one who talks. I don't know their language at all. There are heat flashes in it, and some fine muscle structure around the breathing orifice—"

"I meant, he looks so fragile."

"Fragile. Right. Think about what we'd look like to a gorilla." Ugly? Had Eric been about to say *ugly*? That was the first thing any student unlearned.

Eagle was a Wayfarer Minim, Pillbug built, a sealed hockey puck with a small cabin and cargo lashings bolted on. It rode in the bay of *Star Surveyor II*. There were four seats, one built for Thray. Two were folded down.

Althared was wearing a full EVA pressure suit. He looked like a cluster of clear balloons, and took up a lot of room. At Althared's insistence, Kimber too was in "Moonwalker" pressure gear. She'd packed a wealth of skiing and cold weather equipment in the cargo hold, but in Althared's view this world was nowhere near that friendly. She'd try it his way.

Althared pointed out the base camp, two big domes dropped by the Thray's heavy lifter. When they got close enough she saw four of the large slow insulated vehicles called Skidders. Reflectors marking the survey

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boundaries bounced the midday sun in multiple directions. From the sky, the reflections looked as bright as artificial lights. As they climbed out of the Shuttle, Althared darkened his faceplate against ice blindness. Kimber flipped her filter down.

Now it begins. Sweat trickled down the back of Kimber's neck.

By strict Bio/Geological Survey doctrine, Kimber was supposed to be neutral. Still, the Thray were powerful galactic citizens, and she felt like a small child wanting to please a parent. Humans were so new at this, how else was she supposed to be?

Luckily, all she had to do was use what she'd learned in school, prove Trine had not been recently inhabited by a sentient species that might have a valid right to it, and that the planet held no insurmountable intrinsic threats to life. It should be easy. The Thray had already done the preparatory work. She would review their notes and do her own independent survey, and the Institute would grant their claim. Kimber and Eric would have real jobs well done for their resumes.

Thray biology required heavy insulation against the constant cold. Althared worked with her for three days, but she could see his discomfort. He showed her how to read Thray maps and made sure she knew how to operate the ice Skidder that would be her transportation. She looked forward to every morning, even though she still felt like a child compared to the solemn and brilliant Thray she worked beside. Althared shared information with her about Trine's dry cold climate and ferocious windstorms. He'd made sonar maps of the layers of ice around the base camp. He was willing to discuss the terraforming process they would use. He asked numerous questions about Earth and humans, but he already knew a lot about human history.

Kimber fell into bed too tired to undress each night. The fourth morning, she found the courage to announce she would begin going about on her own.

Althared politely withdrew, and Kimber finally felt in charge and free to start work. She would be in constant instrument contact with Eric, working almost side by side if not in the same physical space. She hoped it would strengthen their working relationship.

The next morning she went out without a pressure suit.

It was no-kidding *cold*. Kimber was geared up for skiing in Nevada or Vermont: two layers of everything, more than that under her parka, a ski mask and fake fur hat with a brim, Blue Blockers, real cross-country skis . . . it was enough. She'd wondered if scents in the air would tell her anything. She smelled nothing but the cold. But she could move more freely, she could snack as she moved . . . and she felt closer to Trine.

She spent two weeks following the Thray maps. Hundreds of detailed readings were beamed between her Skidder and the ship daily using straight sight, hand-held tools, and the instruments in *Star Surveyor II*. It would all go to Eric and into the Verification Link.

Where she could reach rock, she found fossils of long dead plants. The Thray already had an extensive collection; but some of the species she found weren't in their records. She named them. Now they were hers.

She traveled alone except for her link to Eric. She must be extremely visible to the orbiting Thray ship, neon orange parka on glittering white; but she saw Althared only periodically, and always at base camp.

Kimber shuttled samples up to Eric. He did not discuss interpretations of

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her finds. They talked daily, but only briefly unless they were calibrating instruments on the ships.

She remembered that they'd had the same interests when they'd moved in together. It was wonderful. They'd talked . . . *he* talked, mostly, but she'd learned. That was when their studies were the same. Going into their junior years, their courses had changed. He would still talk about what interested him, but now it was a distraction she couldn't afford. Finally she'd said so. For a long time, he'd hardly said a word to her.

Now he'd become the talker again, losing a touch of the reserve. Shutting a man up was supposed to be easy. Dammit.

She tried. "The winds are ferocious. I'd guess there's nothing to stop it, no barriers, just flat ice across most of the planet."

"Mmm."

"The carbon dioxide, did you notice? Three percent."

"Yeah. Strange. No variation?"

"About a percent. The wind mixes the air up pretty good. The continents are all under tons of ice, right? No limestone formation. Where's all the carbon dioxide?"

" . . . Right. Can you spare me for half a day? I can do a pole-to-pole orbit and see if the CO_2 is freezing out."

"Go for it."

The next morning Kimber took her Skidder further out than before. Althared had indirectly requested she stay inside the survey boundaries, and she had until now. But the sonar map showed greater area, the winds had eased off, she was on schedule, and she had legal access to the whole planet. She left quietly after filing a vague plan with the base camp computer.

Kimber drove out toward a simple sector between mountains and probable ocean, colored yellow on the map to represent tundra fields. Her hope was to get a horizon view and maybe dig into the permafrost looking for evidence of past warmth. The first hour she rode across bare flat fields of ice. Dips and rises in the terrain made the horizon line elusive, and she traveled fast without stopping for samples. In two hours she'd gone twice the distance her filed plans called for.

She came over the top of a low hill and found herself dropping fast, manhandling the Skidder through ravines of sharp clear ice punctuated with dark gray and black upthrust rock. Twice she could only move forward by using the Skidder's weight to push through thin walls of ice: running water frozen in bright sheets, like waterfalls trapped by winter back home. She emerged from the twisted chasms into a narrow white valley, and stopped to check her map. Getting lost now would be *bad*.

She hadn't made a mistake: the coordinates she showed were marked as tundra. Surprising . . . but the most extensive Thray mapping had been done elsewhere, on a frozen ocean.

"Eric?" she called.

"I'm back. Where are you? You just lost three hundred meters of elevation."

"I'm in a canyon. It's not on the Thray map, but it's big. Different too—I can see more rocks and less ice."

"Glad you're okay. Kimber—the poles are too warm to freeze carbon dioxide. *I* don't know where it's going."

"Okay. Later. Please scan the area south and east of me."

"Oui, Mon Capitaine!"

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She sent him up a few still pictures to give him her viewpoint, and to show him the canyon's stark beauty. Then she flicked the Skidder back into forward gear. Traction was good and she relaxed and watched the scenery. Tall spires of rock stuck up in the canyon wall, encased in ice. It was a strange formation—usually a long freeze like this would not make such straight walls, but maybe a river had run through here at some point cutting the ice down and leaving the flat valley she was traveling through.

Eric's voice sounded in her ear. "Okay. I can see where you are. The canyon goes for two miles. Scanning. Hey—some of that looks like cavities. You might be above water."

"Not water. At these temps, it would freeze anywhere near the surface. Air pockets?"

"They'd be *big*."

She looked carefully at the ice ahead of her but it seemed to be all the usual shades of white. Then she had to push the Skidder through another thin sheet of frozen ice. She found herself staring at thick ice over a rock overhang. Below, the distinction between ice and rock faded into deep shadows.

"Eric," she called, "I've found a cave."

No answer.

She clambered backward to stand by the shattered hole she and the Skidder had made in the ice curtain. "Eric?"

"Here."

"Good. I found a cave. I'm going to explore. I don't think we have good com, so expect to hear from me in about an hour."

Kimber belted tools around her waist and turned her headlamp on before heading toward the back of the cave. The light bobbed up and down as she walked, making it hard to focus clearly on what was ahead of her. The cave wall appeared to be unnaturally smooth and to turn right near the back. She traced the wall with a gloved index finger for balance in the choppy light, and found herself passing through a natural doorway. She stood still, flicking on her hand-held light to augment the headlamp. Her breathing stopped, and then started again jerkily. As the light traveled around the small room, she stopped it multiple times to highlight crude drawings on the walls. Finally, she rested the light on a figure huddled in the far back.

The frozen bones were large. Whatever wore them in life was more than twice as tall as Kimber, and it sure as hell wasn't a Thray. The hollow bones reminded her of birds; the joints suggested the artist Escher. They differed greatly from Earthly designs. There was an elongated spine—twelve-centimeter-long vertebrae, oddly interlocked—and long bones that could have supported wings. She found scraps of leftover flesh frozen in strange shapes on the bones, like a mummified Andes sacrifice. How could the Thray have missed this in their survey? It couldn't be the only accessible example of the species.

This might be just a cave-nesting bird, she thought. Thray would explore caves; the artist might have been a bored Thray surveyor.

Bored, during a thirty-hour survey? She didn't believe it. Still . . . aliens. . . .

She looked for more.

The angular drawings had been hacked and gouged into the ice. She found the tools: four flint fist-axes repeatedly dulled and flaked sharp again. The tools would have been too small for Althared's hand. Would have hurt him, too. But the birdman's fist was its foot: powerful, with toes become

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short fingers. She held the frozen bones near a fist-ax and saw a plausible grip.

She took pictures. She set up a light for a central piece as big as all the rest. The rest had been just practice, she thought. A maze . . . or an abstract . . . but the shape teased her mind. Suddenly she saw it, a bird in flight, a match for the bones she'd found.

She stepped outside and beamed the pictures up to Eric. Then she returned to carefully add some tissue samples and artifacts to her backpack. She'd see what he'd have to say about *this*.

It was late. Safer to camp by the cave than to head back. She sent her coordinates to *Star Surveyor II*, and then set up her tent under a ribbon of starlight between the canyon walls. As she rolled off to sleep, questions nagged at her. What if the Thray hadn't missed this? What if they knew about it and mapped it as tundra on purpose? Why hide it at all?

As the brilliance of the stars faded in the pale morning light, her suspicions of the previous night felt like unnecessary ghosts. *Of course* she'd find things the Thray had missed. She'd given them less than thirty hours to survey *this* region.

The unprotected surface of Trine was a cold place to sleep. Kimber packed up hurriedly and drove as quickly as she could safely navigate back to the Thray base. Two Thray looked up from the mouth of the cavern they'd been digging. Neither was Althared, so they couldn't talk, but one helped her lift bags into *Eagle*.

At *Star Surveyor II* she crawled through the hatch (flying, not falling) and called out, "Eric! Help unload."

He came, flight deck to lower deck, kicking once at the wall. He'd grown skilled in free fall. "I come, O my Captain!" He eeled past her without stopping.

She didn't like his tone. She didn't like her own either: too commanding. Then again, she wasn't particularly happy with him. "Eric, why haven't I gotten any compiled results back? It's been like sending stuff up into a black hole."

He wiggled out of the hatch, pulling a padded stow bag behind him. The massive bag must have massed as much as he did. He set it coasting, then got behind it and pushed it toward the lab.

Kimber followed him with another bag. He helped her stow it. When he finally spoke his tone was reasonable. "I haven't got anything intelligent to say yet. I've been looking for cross-reference material in the Link libraries. Besides, what you sent last night changes everything."

"We only have two more weeks here."

"I know," he said.

"I need to compare what I sent so far with the new data. There might be clues we missed in the early analysis. I feel like I've been in a sanitized zone all along, and picked up only lies."

"We have the Link libraries. I've been learning how to access them. Kimber, doesn't it bother you? They *know*. They all know the answers to all of these questions, everything we want to learn. We're still guessing."

"Eric, what is this? I've never seen you quit."

"Who said anything about quitting? I'm just not interested in dying. Let's see what you brought, Captain."

Dying? Kimber laid out samples and photographs for his review, backed against the Velcro display wall. "Any ideas?"

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Eric shook his head.

"Come on," she chided. "You scored A's in Xenobiology. What is this thing? Is it something we know about?"

"I've never seen it. Is it a tool user?"

"Yes. Cave drawings . . . friezes, really. Rocks to carve them. This bit of skin, I thought it might not be *his* skin, but *this* came off its skull, so it is. We'll compare the genetic coding. See if it wore clothing."

"Did you tell Althared about it?"

"No. I want to learn more. But I also don't want to insult Althared. I just want to know more and then tell him."

"I think it's gone beyond insult, Kimber. You think you were in a sanitized zone? With *this* in it? They *had* a sanitized zone all ready for you, out on a frozen ocean! You wouldn't have that. *Don't* tell Althared anything."

"Eric," she said carefully, "when I talk to Althared, you're never in front of the camera. Am I wrong?"

"I didn't think you'd noticed. I can't look at an . . . at some kinds of handicapped people either."

"He's ugly?"

"Hideous."

"Are all aliens ugly?"

"Oh, no. Pillbugs are wonderful. This thing, *look* at that wingspan. Birds are beautiful."

"Buzzards aren't."

"Have you seen buzzards fly? Damn right they're beautiful. Are you accusing me of making villains out of the Thray? By reflex?"

"I think it's worth looking at."

"How could the Thray not know about these creatures?" Eric swept his hand above the neat piles laid out on the Velcro. "And if they knew, why hide them? A world freezes. All life dies above the one-celled level. By and by the Thray come along. It's tragic, but what's the problem?"

"Eric, what *is* the problem?"

"The problem is that you and I might keep looking. Might find something more. I think we both win if we live through this survey."

Paranoia.

Kimber started punching up biological species records looking for matches with large birdlike species. Even if it was sentient, it didn't have to be a starfarer. Maybe it had never been catalogued. She didn't find anything that looked right in the databases, and that increased the odds that it evolved here.

"Kimber," Eric said, "While you were gone I found a reference that indicates the Thray may have been here about a thousand years ago. That was *before* this thing died."

"That's not possible, the first survey was less than a hundred years ago," she said.

"Remember, the Thray prepared our briefings. I went looking in other libraries until I found an archived reference. They didn't call it Trine, and it wasn't ice, but the coordinates fit."

"Why hide it?"

"Carbon dioxide. Maybe Trine froze recently." He looked at her stony expression. "The poles are too warm. The CO_2 isn't freezing out. If the continents haven't been covered for more than a thousand years, then that's when limestone formation stopped—"

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"Then the Thray froze the planet? Damn it, Eric! You're accusing a whole species of premeditated genocide! If we're wrong, if we accuse the Thray of a crime this big and we're *wrong*, we'd be lucky to be teacher's assistants in some backwater for the rest of our lives, and not in prison, or extradited to some Thray cavern to face their judgment! Of which we know nothing." She hadn't planned to say any of that. She hadn't quite known it was in her head.

Eric asked, "Did you ever wonder, Kimber, why they chose you? Your psych profile was the most compliant of all of us, at least with authority figures. I know, I looked it up when I lost the job to you."

"And if we're right, if they even guess at what we're thinking, they'll swat us like two flies," Kimber said. "But they have not done anything threatening. Althared is always friendly. He's given in on several points."

Eric silently pointed at her photographs of the flier's bones.

Damn him anyway. She turned her searches to planetary magnetism and technology. The silence settled again.

Kimber worked through the night while Eric slept. In the morning she packed for four days down. Her eyes were swollen from staring at search screens and her whole body was tired. All her muscles knotted up when she slept in free fall.

Eric bounced down from the flight deck. "Kimber, I think you should stay here for a few extra days."

Kimber sighed. The fears that drove her from sleep the previous night floated near the surface. She was truly scared now: scared of what she had found, and of what she had not found yet. Scared that she was seeing ghosts where there were none. The safest thing to do was to finish the survey. Act normal. They were already behind schedule. And *Star Surveyor II* was a fragile egg with no more protection than the distant Institute could offer.

Eric said, "Look, I think the Thray were here before the planet froze. They're hiding that much anyway. I had to dig for days to find a reference, and there's none in the survey prep documents. They're pulling a fast one."

"If they wanted to run a scam, why pick you?" she asked reasonably.

"I'm the top student. They had to pick me, or someone would ask why not. But why you?"

She could feel herself blushing. "We were lovers. *Mated*. To an alien it must be clear we get along."

"That's an interesting take," he said slowly. "I hadn't thought of it. The Thray could have got that off our email, right?"

"That would be . . ." Illegal, of course; but they'd had a bitter flame war online, too, and then three years of silence. "More likely they looked at our psych testing," she said. "They might misinterpret what they found."

"They might have got it right," he said.

"Oh, God. You're a xenophobe, aren't you? And you try to give me orders, and then I do whatever you tell me not to. They put *me* in charge. If you tell me it's *No Go* on the Thray project, I'll do the opposite."

Eric had that *verbal minefield* look. Cautiously he said, "An alien might think we're that simplistic."

"Eric, I'm scared," she admitted. "But I can't do anything obviously different. If they are dangerous, and they think we know it, we're in a lot of trouble. We'd best play stupid."

He looked at her appraisingly for what felt like forever. "Kimber, are we thinking the same thing? This world froze *fast*, and recently. Worlds this

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near to Earthlike are scarce. If a world evolves anything intelligent, the Overlords protect it. Terraforming . . . it rolls in your mouth, it's such an easy word, but . . . shaping a planet. The closer we look, the harder it gets. What if you started with a world that was already inhabited? It would be so much easier."

"They're burrowers. It must be easy for a burrower to hate birds," Kimber said.

"What if the Thray found this place and *made* it cold?"

"Froze a whole world?"

He flared, "Well, they plan to warm one!"

"I guess so. How?"

"I think they blocked the sun. Changed the insolation—the amount of the sun's warmth that gets through to the surface."

"Same question."

"Don't laugh yet. They'd need a mirror bigger than whole planets. When Althared was talking about warming Trine, he said . . . what? Sunlight from a hundred thousand klicks around Trine? That's ten to the sixteenth square meters. Three hundred thousand trillion. A mirror bigger than whole planets. Now laugh."

Kimber didn't feel like laughing.

"Right. *That* part's plausible because they already need the mirror for the warming phase!"

"A mirror that big, would it be hard to hide?"

"Hah! I'm still working on that."

"But it's only engineering. We picked a killer and now we're working on the locked room. Eric, why haven't they swatted us?"

"Plausibility. Got to make it look like an accident."

"Or maybe a murder-suicide. What if you could roll it up?"

"Or fold it? Make the mirror a few atoms thick, you could fold it into something the size of a . . . city? Aw, Kimber. Have you ever tried to refold a map?"

"Say it's gone. They destroyed it, dropped it into the sun. How can we prove anything? There'd be no trace of what they did on the surface, barring the ice itself."

He said nothing.

"Eric, how do you make coffee? Show me."

He showed her, carefully. It took fifteen minutes. Neither referred to anything outside their ship. Kimber was hours late at Trine Base; she didn't mention that either.

They went up to the flight deck and sipped coffee from squeezebulbs. By and by Eric said, "Give me a sanity check here: they *didn't* destroy the mirror. They need it for the warming phase."

"You're sane."

"Permission to run an errand?"

"Where?"

"I want to look in the L1 point. I'll be back in a few days." He saw her go blank and said, "The first Lagrange point, between Trine and the star. It's around a million klicks inward from the planet. It's an equilibrium point. Whatever you put in a Lagrange point, it stays if you don't nudge it. *Metastable* equilibrium. We've been thinking about a big, big mirror, but what if they used a lot of little ones? We'd—"

"They'll see the ship move! What do we tell them?"

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Eric glared at her. "I think we're running out of time."

"But what do we *tell* them?"

She waited while he thought it through.

"I wouldn't say anything," he said. "If they've left something—doesn't have to be a mirror—*any* bit of evidence anywhere around Trine, then as soon as I start searching . . . they don't have to know what I think I'm after. Why bother to tell them a lie? They only have to decide if I live to talk. My best chance is, I *can't* deliver the verdict. Only you can talk."

"And I'll be down there."

"A hostage!"

She blinked back tears and turned away from Eric so he wouldn't see. She told herself she was tired and stressed, but it was more than that. They were in a box. If they played nice, they'd be let loose. And they'd be liars.

Or Eric was crazy, and so was Kimber.

She turned to him. "Eric. I want to dazzle them with footwork."

They talked it through. At one point Eric said, "Skis? You are nuts! The ice on this planet has been settling for hundreds of years. It's a sedimentary rock, *not* the snow you're used to."

And again, "This isn't pretend danger. It's *real*. If you *really* got killed by accident, then there's only me to worry about, and I'm *mute!*"

"No," she said. "Thray can't take cold. They don't like snow. They might not like *any* kind of surface conditions. Althared will think I'm committing suicide when I'm only out cross-country skiing. And we'll have one more thing going for us."

She explained. He listened. He said, "I can sure use the distraction. Next question. Why are you late going down?"

"Maybe we kissed and made up and indulged in," she glanced at the computer's clock, "three hours of mating practices. Or maybe we fought about this, this snow trek."

He didn't leer; his lips didn't even twitch. He said, "Okay. Any way it breaks, they'll be watching *you*. If Althared asks, *I* wanted an unblocked view of the sun . . . and a chance to get away from *you*, because we had a fight. Good call, Kimber."

"*Is* there a touch of that?"

"Not bloody funny. It's *plausible*. Make your call."

Althared wiggled his head rapidly, then settled on a left profile. He waited.

Kimber said, "I expect to complete my exploration in two weeks."

"Acceptable."

"Please access your map."

"Pause. Done."

Kimber's map was already displayed. She zoomed on Integra Continent. At her direction the Thray had set their base near the mid-continent, a mile below the peaks. Kimber popped up a green dot where a trailing end of Integra curled into a bay.

"I want to drop *here*. Over the next ten days I'll make my way back to Trine Base. That gives me four days leeway, to get lost or to take a closer look at anything I find. I want you to arrange to drop a Skidder for me and take the *Eagle* back to Trine Base to wait."

Althared turned his left eye full on her, then the right, then left again. "Kimber, have you lost your sanity?"

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She glared offscreen, and Eric grinned back. She exploded, "Do you *all* think like that? If I start and end at the Base I have to loop. This way I can go twice as far! Thus far I've only seen the mid-continent. Now I'll go through terrain none of us has explored."

"You take a fearful risk for no clear profit."

"You built the skidders. Aren't they safe? A skidder does fifty on the flat, but call it twenty; that's plenty of leeway. I can drive for ten hours a day. If I lose ground I'll drop back to sea level. In ten days I'll cover two thousand miles and be back at Base."

"Chief Surveyor, it would be tragic if you went mad during your investigation. If you disappear into the ice, tragic also. We must return our legal dance to the beginning, our destiny delayed by twenty years."

"I'll be careful." She waited.

"I will make arrangements. Come for me in two hours."

There was no pomp and circumstance this time, and no return to the great viewing port. When she docked, Althared simply climbed into the *Eagle's* cabin and signaled for her to head down. Kimber left the communications port open so that Eric could hear them. Knowing Eric was listening felt like spying, but it was comforting as well.

Althared said, "I had hoped to see a draft of your report on the first half of your work."

How should she answer? "My notes are half-digested. I'll organize them during the trek."

"May I help? Our translator program has software to collate such material."

She stared. Let the *Thray* organize her evidence? She asked, "If I don't follow the regulations, who gets upset?" She intended to suggest danger, but . . . might he really answer? *Who are the Overlords?*

He said, "Your answer is proper. Of course we must obey the code. I had forgotten that this is your first survey. Perhaps you need more time?"

Kimber doubted he had forgotten. His greatly inflated shape, the unearthly features within his fishbowl helm, seemed more alien, more intimidating . . . and Kimber suddenly remembered his big, spidery hands on her, turning her in free fall to face a window. Had he *meant* to intimidate?

She was long past that! "In ten days I'll be ready, fourteen at the outside."

Blotch raced beneath them: the major continent, its edges blurred by a kilometer's thickness of ice. Now the terrain flattened over what had been ocean. Here came the western peninsula of Integra, seen through an orange glow of reentry—

"Althared, when did your people first visit Trine?"

"Why do you ask?"

Damn, she thought, how subtle. "I'm trying to determine how long the ice has been in place. The air is so dry it's hard to imagine any running water, but I found a plant that looks like it was alive recently." There were plant fossils in her samples. And—"Althared, where did all the carbon dioxide go?" She *had* to ask that, didn't she? Earth itself had twice been frozen, and the alien knew that *Kimber* knew—

Althared looked directly at her. "We saw that too. We think the ice spread over time; the last of the bare ground was covered a thousand years ago, more or less. There may have been a geologic event to hasten it. Smoke from volcanoes. A major meteoroid impact.

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"That is enough of geology. Please tell me about the plants you found."

"I have a dozen new species. Take over?"

Althared took the flight controls. Kimber popped up a display. She ran through her records with some care: rock formations, traces of plants, threads that had to be a root network, plant genetic material—not DNA, but a related chemical. She avoided showing hollow bones or wall friezes.

The feeling that she had trusted Althared too much was getting stronger, fluttering in her stomach. She ran through videotapes of her travels, the digs, plants, and her classifications. She let her pride show; she burbled; she wished aloud that Eric had completed his notes and addenda, and let anger leak through.

The Thray made no comments, had no expression to give back; he watched her and her displays with his left eye, flew with his right. The continent's midrange passed below, white on white and two red-and-black dots for Trine Base. More white ice, growing close. There! Black and red, a tent, a Skidder and two pressure-suited Thray.

The Thray helped her get her gear from *Eagle* into the Skidder. Althared stared left-eye, right-eye at a pair of broad skis. He didn't seem familiar with them, but he didn't ask. The three let her test the Skidder; let her set it moving, before they took off.

Red-and-black *Thembrlish* passed overhead every two hours, close enough to show like a baroque moon. *Star Surveyor II* was, of course, gone.

She kept the mountains on her left. The ice was rough, sometimes a jumble of boulders, sometimes great splits. Surprise crevasses scared her twice. At night she put up her tent, but she slept the way she'd traveled, in her pressure suit.

In the morning's brilliant light that seemed excessive. She changed in the tent, into gear that would have looked familiar on Everest. Three percent carbon dioxide had her puffing, but the air was thick, with enough oxygen at these low altitudes.

By the fourth day she was cold from the inside out, and tired of camping without the warmth of the base camp. She'd found nothing but ice. She wondered if she'd gone the wrong way: the continent's curling tip would make a good bay, if Trine's Fliers sailed ships.

The morning of the fifth day the easiest path descended gently for several hours. She spotted a large cave opening and headed the Skidder into it. Its lights illuminated a long tunnel that was mostly rock with very little ice. The tunnel narrowed abruptly and she had to park the Skidder. The edges of the constriction were unnaturally smooth, like sand fused to glass. She resisted taking a glove off to feel the smoothed edges. It was cold enough that she'd leave skin behind.

Cautiously, she stepped through. There was a short hallway and then a huge cavern. The Skidder's lights illuminated the back wall faintly. Bright colors showed in the circles of light. She took a few steps forward, added the illumination of her hand-held light.

It was a painted frieze. She ran her flashlight over the shadows around the headlamps. There were the fliers—long feathered wings and thin bodies. They were fantastic images—almost angels but in no way human. She walked backward, entranced, and took a floor light from the Skidder with shaking fingers.

The additional illumination brought colors and shapes out more clearly.

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She could see the ceiling now, and carved into it was the unmistakable image of an egg painted in red and white fractals: a Thray ship.

Kimber turned slowly in the new light and her eyes found a ledge with the bodies of three more fliers, complete and frozen. They were different sizes. Family group? She closed her eyes and struggled to control her breath.

This *didn't* prove that the Thray had frozen the planet or even caused harm to the fliers. But the fliers were sentient, and the Thray had been here when they were.

She carefully videoed the cave, twice, and checked her disks to be sure they showed the most damaging evidence, then tucked equipment and disks in her backpack.

The Skidder had to be backed through the cave. By the time she was free of it, she was shaking from the effort. The slopes were smooth ahead; the sun gave at least an illusion of warmth. Kimber ran the Skidder up to fifty and it died.

Dead as a stone. The DON'T TOUCH mark was on the motor housing. Kimber began to smile. She wasn't crazy. It was all real. She had to live to tell Eric!

She'd have to be selective now.

Tent. Clothes: she'd better leave the pressure suit, rather than depend on the air recycler or temp control. Ski mask and a scarf to breath through. Wear everything. Zippers in the orange parka for temp control.

Her data: video disks, notes, instrument recordings. The main camera was too heavy: she left it. She kept what she thought were the skull and wing of a child, and a fist-ax drawing tool.

Food. She rethought that, set up her tent and the stove and spent a few hours eating herself stupid. Going hungry for a few days wouldn't hurt her if she remembered to drink . . . *thaw* and drink a lot of water. She packed what was freeze-dried and left everything that wasn't.

Skis.

She made three hours, perhaps twenty-five klicks, before she quit for the night.

At full dawn she was on her way again. She grinned up at *Thembrlish* drifting across the sky. Her parka was neon orange and her ski tracks would show too, but would they look? Next to the ruined/sabotaged Skidder she had left her pressure suit splayed out on its back in *savasana* pose, faceplate closed.

She spent the seventh day striving for altitude, not distance. She knew too little; she must see more of what might save her or kill her.

There was nothing wrong with her timing.

She settled on the local crest, comfortable in full sunlight, her back to a flat boulder, and set up her stove. Presently she used binoc specs to look around. In a glare-white world, a red double-dot, a colon mark, was wobbling at the jagged eastern horizon.

It rose slowly.

Another red colon rose behind it.

It dawned on her that she was watching heavy lifters move Trine Base.

She watched her lifeline being pulled into the sky. The Base wouldn't just disappear, she thought. It would be set somewhere else. The implication: the Chief Surveyor knew where it was, and got herself lost anyway.

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What would they expect of her now? Bereft of rescue, robbed of even a goal, Kimber Walker had nothing left. When the cold became overpowering, as it must, she would dig. Whoever found her later would find her hidden from her Thray rescuers and dead of starvation.

Of course she wouldn't be where Althared expected her. Skis were moving her faster than that. Still, unless Eric came for her, that was how she'd end up.

Keep moving. Stay high. There was one more thing the Thray didn't know.

Darkness deepened the cold. Kimber pulled a lightweight reflective covering from the backpack. It was torn. She settled it around her, tucking it carefully between her and the frozen rock. At least it would be warmer than stopping on bare ice. The rock had collected some of the sun's tepid warmth.

The Thray ship rose above the glaciated eastward peaks. Seeing it brought tears and anger. How could she have let Althared use her so?

But Eric the cynic would be asking: why the mind games?

Leaving the pressure suit splayed like a dead woman, that was fun, but it was a message to Althared. *Kimber knows.* Althared knew she knew. Why not just kill the Chief Surveyor and have done with it?

Kimber knew people who would have trouble doing that. She might be one herself. But why choose such a one for such a mission? Unless. . . .

Unless the sons of bitches were just *nicer* than characters in James Bond movies and *The Godfather*.

Every muscle ached. She'd ripped her pants at ankle and knee; cold needled in to rob tiny parts of her of any sensation. She imagined ending up frozen forever behind a water curtain. Not today . . . but she didn't have the energy to erect the tent. This was good enough. She slept.

As light started to spill onto the ice, Kimber pushed up and looked around approvingly. A good last morning, if that's what it became. There were blue skies above pearl drops of rock on ice. She recalled how soft and simple Trine had looked from the great viewing deck while Althared stood beside her and talked about warming the planet.

Inhabitable galactic real estate was valuable, but nowhere in her studies or the stories of other surveyors in the bars by the Institute had she heard of anything so proud and horrible as the freezing of a world.

She climbed. Sweat chilled to an uncomfortable dampness against her skin whenever she rested. It couldn't matter. It wasn't like she had enough time left to die of a cold. Such a simple thought. She knew she could think more complex thoughts once. She knew that there was a time when she didn't expect to die. And another time when she was warm, and didn't have to gasp for air.

Halfway up, she let herself rest. The late morning sun reflected from icy rock faces and turned the light into dappled rainbows. Kimber was grateful for the display, for something, however small, to smile at. The Thray had done this world no favors. She imagined a green world with flying beings, and the anger set her climbing again. Althared had joked with her and had been gentle when he taught her to drive the Skidder and work the maps the Thray had made. How could the Kimber of three months ago have been so stupid? There, that was a more complex thought.

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She balanced on her knees and elbows, pulled herself up the last bit of a sharp slope to find a wide flat spot. It would have to do.

Get high! Get exposed! It was the last thing any Thray would think of, and Eric had to be able to see her . . . if he wasn't still days away, or days dead.

She pulled a signal flare from the backpack, and lay down holding the flare over her stomach. She had a few more, and locators too, but she wouldn't use it until she *saw* him. There was no point in signaling the Thray.

She dozed. It seemed like hours passed. Her watch said it had been thirty minutes. Next time she might not wake at all.

"Kimber?"

She jerked upright. "Eric! What did you find?"

"Later. I think we're in a hurry. Can you see me? Straight above you?"

She fumbled for binoc specs, but already they weren't needed. *Star Surveyor II* was straight up, tiny and bright. Wouldn't his orbit take him around, out of sight? A tinier speck diverged.

His voice continued. "Kimber, it's amazing what you can do when you just don't have to think about running out of fuel. I've left the ship on autopilot, hovering at less than half a G, about three thousand miles up. The Thray are still thinking in terms of orbits, so they just went behind the planet. Gives us at least half an hour. *Eagle* can do two G. See me now?"

"Yes." Forget the flare. "Did you find anything?"

"I said I'd be back when I did. I'm here. For a moment I thought that might be you at the Skidder. What happened?"

"It died."

"Sabotage?"

"Who knows?"

The silver speck grew fast. Slowed, hovered. Kimber tried to get up. No go. *Eagle* set down. Eric came out at a run.

"Thank god I found you," he said. "I thought you'd be dead." He dropped to the snow. "We need to get your message off. I would have done it myself, but I can't. I wrote everything up for the Verification Link, though. It's ready to go."

"I've got more pictures."

He stood briskly. "We've got to go before the Thray know we're here." Eric took her wrists and pulled her up, and supported her weight while she gained a semblance of balance. He half dragged her to the *Eagle* and left her propped up while he returned for her backpack.

Kimber called, "I think you were right. The Thray want me dead for what I know. Can't be my personality, right? But they're not doing anything direct, Eric, and I think it's because they can't."

Eric guffawed. "Wouldn't that be nice!"

He dropped his pack. "I found this." He pulled out something flat, and skimmed it at her like a big Frisbee.

She threw up an arm to block, and caught it. It was square, and weightless, amazingly light. She looked at herself . . . filthy, not fit for human company, but wearing a grin much nastier than she was used to . . . and then at what she held:

A flat square mirror half a meter on a side, amazingly brilliant, with edges four or five centimeters wide that tried to shift under her hand. She wiggled the mirror, letting it find its own direction. The flaps relaxed when the mirror faced flat into the sun.

"I aimed the ship to drift through the L1 point. When I got close I saw a

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black speck on the sun. I was wrong all along," Eric said. "You *couldn't* put this thing in the L1 point and expect it to stay there. Pressure from sunlight would push it right out to the stars. But by the time I worked that out, I was on my way. That's why I'm still alive, maybe. If the Thray thought I was going to the right place, they'd have swatted me."

"So. . . ?"

"They needed *hundreds of trillions* of these death mirrors. Little mirrors for flaps to steer with, and tiny brains with instructions to stay between the sun and Trine, and turn edgewise and fall back if the sun gets too far away. The Thray engineers would have put them deep inward, just a few million miles from the star, where the star's gravity balances the light pressure. The Thray chilled the planet, then sent a signal to the death mirrors to disperse . . . one way or another. There must be a lot of signals that would do what they want done. But if you raise the death mirror's maximum distance, it would ride the light right out into the halo of comets and wait. Later they can bring them back and use them for the warming.

"Out of hundreds of trillions of the things, a few are bound to go wrong. Programming fails. Say a few hundred still stay between Trine and the sun, but they sail outward. They'll end up in that wastebasket of gravity, the L1 point, and that's where I found this. Isn't it beautiful?"

"Oh, yeah."

He took it from her, tossed it in the back seat. "What've you got?

"Videotape of a cave ceiling. It's in the pack. It *nails* them."

There was gravity: *Star Surveyor II* was still hovering. Kimber began plugging widgets into the Verification Link. Plugs were labeled, a big help. Eric climbed straight to the flight deck.

She felt the deck tilt hard over, and kept working. Eric was getting them out of here. And now it was all there. She need only send the verdict.

Gravity disappeared.

Kimber shrieked and convulsed. It was as if she'd fallen off a cliff. She snatched for a handhold and clung like a monkey, hearing Eric's yell like an echo of her own.

"Wait," said a voice she knew.

Althared was on her screen, his alien head turned in profile. Pale blue veins pulsed around a circular mouth lined with lots of tiny teeth. Frankenstein be damned, just because he's ugly doesn't mean he's a victim! *He* doesn't think he's ugly.

"Chief Surveyor, you appear to have misinterpreted. You owe us the ability to respond before you reach a verdict." he stated.

Kimber said, "I see no point." She heard an echo overhead. Eric was in this conversation too.

"You're falling," the alien pointed out.

"Not fast." When she was practicing with the Verification Link, Kimber had seen a bar displayed—universal symbols for **DON'T TOUCH** and **AFFIRM** and **SEND.** Now she was trying to get it back.

"I see you found one of our mirror modules," the alien said. "We brought them here early, before your verdict allows us to act. We must test them, yes? But it will be thought premature."

"It might at that," she said. *Here* it was. She tapped **DON'T TOUCH.**

The screen printed, **You have chosen to deny the mission that you were sent to investigate. VERIFY?**

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Eric bellowed, "Make a decision! The big ship is coming down our throats with two heavy lifters!"

"Your arrogance," Althared said, "your presumption, your *hubris*. How dare you presume to judge us? If you send that message you must die."

"I was selected," she said. She hit **VERIFY,** then **SEND.**

Althared must have seen. He screamed something fluid, then, "Betrayer! Why would you harm us?"

The message was delivered, the Flyers would have justice. Kimber spared a few seconds to send Althared her video of the frieze on the cave ceiling. Flyers and a Thray spacecraft. *I did it for them.*

Eric called, "Kimber?

There was nothing more to do here, and suddenly she really wanted to be with Eric. She pulled herself up into the flight deck, and froze.

There in the Shuttle windows, *Thembrlish* loomed huge; but Trine was the whole sky. The Thray ship was pacing them as they fell.

Kimber got her breath back. She moved forward, touched Eric's shoulder. Althared was onscreen here too, left profile and a breathing problem. She ignored him. She asked Eric, "How long?"

Eric said, "Oh, twenty minutes, thirty . . . I don't know. Long enough. This ship can't do a reentry, Kimber. *No* ship reenters straight down."

The Thray ship veered sideways and was gone. Kimber saw thrust distort Althared's features. She said, "Althared, give us back our drive." Worth a try, she thought.

The alien was wheezing . . . sobbing? "I cannot. I do not captain *Thembrlish.* Your death is ordained. You will fall."

Thump.

Eric said, "What—?"

"It came from below. I'll go look." She kicked herself aft.

Thump.

She got her head and shoulders into position in time to see the well in the Verification Link spit out a silver medicine ball. The ball *thumped* against the hull, unfolded into a Pillbug, kicked and wriggled and bounced back at the Verification Link. Two more were already in place, clinging to the filigree along two edges. The third joined them. Its myriad feet slid into tiny holes in the filigree border. A fourth silver ball emerged, hit the hull (*thump*), unfolded and aligned itself along the fourth edge. Four Pillbugs were joined nose to tail.

The VL spoke in the same translator's voice that had been Althared's. "We come to seek explanation for your verdict—"

The voice stopped. Then small machines began popping through the BH (Big Hole). Three Pillbugs peeled loose to lock components together into a blocky toroid.

Kimber crawled down, hoping to see better. One Pillbug came to look her over. She tried to find its eyes.

The floor surged up.

Kimber found her footing as Eric called, "Yow! Kimber, I've got thrust. Ump?" The thrust was still rising. Kimber tried to kneel, but it was too strong. The floor hit her hard.

She saw the Pillbugs crawling up the wall, back into place around the VL. They seemed to be talking to Althared; at least there was a humming warble, and Althared was answering in no human language.

She couldn't reach a window. Two or three times Earth's gravity had her

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nailed to the floor. She felt the resonance and heard the roar as *Star Surveyor II* plunged into Trine's atmosphere.

She heard and felt the roar die away.

Then four Pillbugs crawled into the BH and were gone.

"Here, take these pills too. Is that any better?"

Kimber drank, swallowed, drank. She said, "Go easy on the neck."

Her left eye hurt. She couldn't open it. Her chin rested on a collar of rubber foam. Eric was wrapping gauze around her head and eye. "Nice shiner, Chief Surveyor. I can't tell if your neck's broken," he said, "so wear the neck brace. Nobody can do anything about a cracked rib, though. We'll be home about as fast as we came, and then someone qualified can look you over."

"Next question. Pillbugs," she said.

"I never even *saw* them, and *you* didn't use the camera."

"I was busy being crushed!"

He shrugged it off. "Do you think those were the Overlords?"

"They don't talk well. Eric, a Pillbug is too small to have anything like a human brain. They'd have to be *components* of an intelligence. I saw them link up head to tail. Communication must be built in, right?"

His face went slack as he thought it through. "Hardwired, nerve to nerve."

"There's nothing in their evolution for just talking, not to each other, certainly not to *us*."

"We can't even ask them if they're servants of something bigger."

"Eric? They've got the VL. Instantaneous communication. With that you could link up the entire species at once! An arbitrarily complex brain. *Sure* they could be the Overlords."

"I think I bent my brain," Eric said.

"Where's *Thembrlish?*"

"The Thray? They left at two gee. They've already done the Shift Trick. There's no way to run far enough, I expect, but they're giving it a try. Damn, you were right. They just can't reach out and *kill*."

"Doesn't cramp their style."

"Oh, hey, I looked in the University records. Kimber, our credentials have been upgraded by a *lot*."

She smiled. "Pillbugs to the rescue."

"Only *after* we made our decision."

Kimber smiled weakly at the word "we." Her ribs hurt sharply, but that was fading. She said, "I wish they'd left us some magic bandages."

"You wouldn't want an alien doctor, Kimber. Nobody *wants* to make medical history."

"Vee vill perform an exshperiment upon this . . . creature. . . . " She was woozy. "In a minute I'm going to be no fun any more."

"That's the pills. I'm going to drop back to half a gee so you can sleep."

"Night."

"Night." ❍

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ON BOOKS

Paul Di Filippo

The Futurological Congress

If aliens possessing incontrovertible proof that they had witnessed the Big Bang ever appeared, humanity would doubtlessly fall to the ground in awe. I had somewhat the same reaction reading Julius Schwartz's *Man of Two Worlds: My Life in Science Fiction and Comics* (HarperEntertainment, trade, $14.00, 197 pages, ISBN 0-380-81051-4). With the aid of co-writer Brian Thomsen, the eighty-five-year-old Schwartz—who, it seems, has been everywhere and done everything in his twin fields since his teenage years—regales us in a light, humorous voice with various anecdotes from his long, productive life. Whether handing Ray Bradbury the check for his first sale, recommending Leigh Brackett to the Salkinds as script-writer for the original *Superman* movie or ushering in the Silver Age of comics, Schwartz exhibits elan, intelligence, and glee. This big-hearted legend truly maintains the same sense of wonder he exhibited upon seeing his first copy of *Amazing Stories* circa June 1926, and that's no small accomplishment.

Mike Allen's *Defacing the Moon* ($3.50, 38 pages, ISBN unavailable), a chapbook of poetry from DNA Publications (PO Box 2988, Radford, VA 24143), comes with endorsements from James Patrick Kelly, Bruce Boston, Jane Lindskold, and Lawrence Watt-Evans, and these enthusiastic blurbers speak truthfully about Allen's zesty poetry. wide ranging, but with an emphasis on biological themes and concrete poems, Allen exhibits a fine hand with a memorable phrase and a mordant yet humor-tinged viewpoint on life. My favorite poem might very well be "Disaster at the BrainBank™ ATM," which posits a life-changing machine gone bad.

In *A Dance for Emilia* (Roc, hardcover, $14.95, 96 pages, ISBN 0-451-45800-1), Peter Beagle works his traditional magic with the themes of friendship and love, juggling his favorite icons of ghosts, cats, art, and women. Mix two longtime aged friends, Jake and Sam, Sam's young lover Emilia, and an Abyssinian cat named Millamant who begins to exhibit extremely strange behavior after Sam's death, then filter the potion through Beagle's romantic sensibilities, and the result is a tale alternately whimsical, painful, and uplifting.

Ostensibly, all SF involves science of some sort. However, this tautology begs such questions as, "What is science, how does it work and why?" and "Is science good for mankind?" Popular-science books, of course, provide certain answers to these queries, if only by the assumptions their authors make. But for an intriguing dissenting view of science's role in our lives, you should definitely read Wendell Berry's *Life Is a Miracle* (Counterpoint, hardcover, $21.00, 124 pages, ISBN 1-58243-058-6). A poet and lover of the land, Berry argues convincingly for a counterbalancing, humanist force to rampant scientific utilitarianism. Using E.O. Wilson's *Consilience* (1998) as a convenient punching bag, Berry skewers scientific imperialism and the foibles of academia

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with wit and sarcasm and some sympathy, while also sketching out his views for a potential republic resembling a literate and spiritual ecotopia. This impassioned book will doubtlessly generate much useful controversy, and could well inspire some thoughtful SF as well.

If Tom Clark threw a party for the writers he admires, I bet the crowd around the pretzel bowl would look something like this: Robert Coover, Don Webb, Ishmael Reed, Lance Olsen, Thom Metzger, David Prill, and Steve Aylett. And if Clark's prose-poem/novel *The Spell* (Black Sparrow, trade, $16.00, 205 pages, ISBN 1-57423-123-5) had been casually left next to the dip'n'chips, open to any brilliant page, every one of these seriocomic surrealist geniuses would be locked onto its tautly strung yet loosely goofy prose tighter than a Cruise missile, hoping to steal some choice bits. *The Spell* instantiates a subcreation utterly unique, a paranormal realm dotted with such landmarks as the Pelting Villages, Insanity Lake, and the Flypaper Towns. In this Lafferty-esque milieu, the doomed love triangle consisting of Big Jesus Toomer, Long Lear, and chanteuse Nivene resonates with both *The Idylls of the King* (1859) and the idle times of trailer park queens and kings. Amidst the baying of two-headed dogs and the howling of eschatological storms, the protagonists brawl, love, and wreak comic mayhem.

This novel is the torch song P.J. Harvey would sing if she held Krazy Kat on her lap, or perhaps the ballad Bruce Springsteen would yowl while resting in Paul Bunyan's shirt pocket. If neither analogy rings any bells for you, just call the book the filmic version of Joseph Campbell's *The Hero with a Thousand Faces* (1949), as directed by John Waters. (Black Sparrow, 24 Tenth Street, Santa Rosa, CA 95401.)

Where is your copy of the August 1988 issue of this magazine? Not handy? Even if it is, you will surely want to purchase the most recent publication from The Nutmeg Point District Mail (PO Box 43072, Upper Montclair, NJ 07043), a society headed by Henry Wessells and devoted to reprinting the work of Avram Davidson. *El Vilvoy de las Islas* (chapbook, $12.00, 32 pages, ISBN unavailable) showcases Davidson's story from that twelve-year-old magazine and surrounds it with cogent critical material by Joanna Russ, Don Webb, and Gregory Feeley. Davidson's Latin American tall tale is funny, affecting and erudite—in short, all the qualities that made his work such a treasure—and well worth your renewed attention.

How to hook your average print-oriented six-year-old on SF? Try giving him or her Brian Pinkney's *Cosmo and the Robot* (Greenwillow, hardcover, $15.95, unpaginated, ISBN 0-688-15940-0). This robustly illustrated tale of young Cosmo, his robot Rex, and his big sister Jewel, who are all exploring Mars (with parents along too, natch), recounts a simple but rich episode of friendship, initiative and daring—plus elder-sibling comeuppance! Next step after this for the neophyte: Heinlein juveniles. It's your duty to future generations of fans.

A dense, eccentric and beautiful book, *The Great Encyclopedia of Fairies* (Simon and Schuster, hardcover, $25.00, 184 pages, ISBN 0-684-86957-8), written by Pierre Dubois and illustrated by Claudine and Roland Sabatier, will provide many, many hours of dreamy delight. Dubois's quintessentially romantic Gallic text alternates quasi-historical discourse with enchanting storytelling as he mines the world's mythologies for fey creatures. His otherwordly taxonomy is idiosyncratic: the book segregates its denizens

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into six fanciful divisions: "Maidens of Clouds and of Time," "The Fairies of the Hearth," "The Golden Queens of the Middle World," "The Faeries of Rivers and the Sea," "The Maidens of the Green Kingdoms," and "The Ethereal Ones of Infinite Dreams." Dubois's elastic concept of fairies stretches from monsters such as the Banshee to enchantresses such as Oriental apsaras, and plenty of lesser-known beings (pillywiggins, anyone?) are herein lovingly detailed. A strong sexual component provides an alluring enticement throughout. And the luscious, eye-popping illustrations by the Sabatiers recall the work of Milo Manara and Kay Nielsen.

Musically adept, Carter Scholz might very well be the only writer in the SF world capable of structuring one of his novels (*Palimpsests* [1984]) along hidden polyphonic lines. Now Scholz the musician steps to the fore and fills our virtual concert halls with an octet of weird and vibrant electronic compositions. From Frog Peak Music (PO Box 1052, Lebanon, NH 03766) comes *8 Pieces* (CD, $15.00, 65:32 minutes, FP009), an album that soars across a wide emotional and tonal range, by turns stately, sprightly, spacey, shrill, somber, staticky, supernatural, and sacred. From fierce, insensate algorithms spring throbbing, living songs.

The year 2000 marked the hundredth anniversary of the publication of L. Frank Baum's *The Wonderful Wizard of Oz*, and also saw the arrival of two new Oz books. Martin Gardner's *Visitors from Oz* (St. Martin's, trade, $12.95, 189 pages, ISBN 0-312-25437-7)—which actually had a hardcover publication in 1998—manages to be rather unsatisfyingly both canonically correct and revisionist. While adhering to the Oz Bible, Gardner introduces many of his dissonant pet themes and loves, including Carroll's Alice and topological tricks like the Klein Bottle that brings Dorothy, the Tin Man, and the Scarecrow to our Earth for a blundering visit. Mixing in topical satire while still attempting to replicate the tone of Baum's prose, Gardner fashions a tribute that's chimerical at best.

On the other hand, Edward Einhorn has captured the real spirit of the Emerald City in his *Paradox in Oz* (Hungry Tiger Press, hardcover, $24.95, 238 pages, ISBN 1-929527-01-2). This gorgeous book, with a wealth of witty and archetypically Ozian illustrations by Eric Shanower, opens when a plague of aging descends on Princess Ozma's realm, forcing her to take action to save her citizens. Introduced by Glinda to the Parrot-Ox—a multiply unique beast who springs into being whenever a paradox is mentally apprehended—Ozma embarks on a time-travel odyssey that involves alternate universes and dystopias. This stefnal material is incorporated brilliantly into the Baumian *weltanschauung*, and Einhorn's new characters harmonize perfectly with the famous ones. By focusing on Ozma, Einhorn avoids the overfamiliarity of Dorothy and posse. This book insures that Oz will enter the new millennium in style. (Hungry Tiger Press, 1516 Cypress Avenue, San Diego, CA 92103.)

Alla for Om, Om for Alla

Studying the genealogical charts that preface Rudy Rucker's *Realware* (AvonEos, trade, $14.00, 305 pages, ISBN 0-380-80877-3), I realized several things about this series that began eighteen years ago with *Software*. First, Rucker has written a generational saga that spans sixty years of mind-blowing change. From an era recognizably close to our own, Rucker has delivered us easily into a

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future unimaginably weird. Second, this series has always been as much about family matters as it has cultural and technological ones. And lastly, the series has charted in perfect transreal style Rucker's own evolution over the past two decades, from pure gonzo (brain-eaters) to more "mature" (father-son reconciliation) attitudes.

In *Realware*'s immediate predecessor, *Freeware* (1997), the biggest plot development concerned the arrival of cosmic-ray-riding info-aliens who promptly decrypted themselves into new bodies on the Moon and Earth. In this volume—which really seems the ultimate *Ware* capstone, considering the pivotal role played by Cobb Anderson, our original protagonist, at the climax—the aliens bestow on humanity a device known as the "alla," a cornucopia connected to a hyperspace "goddess" known as Om. The alla allows the production of "realware," almost any object envisionable by the lucky possessor. Needless to say, this double-edged sword of a gift soon leads to instant chaos (reminiscent of the societal repercussions described in Knight's *A for Anything* [1959]) which is only rectified at the last minute by the departing aliens.

Threading through these large events is the goofy story of Phil Gottner and Yoke Starr, young lovers who are swept up in the alla-shennanigans. Their eventual wedding (along with the hitch-up between Babs Mooney and Randy Karl Tucker), to which event practically every major character is invited, coincides with the near-destruction of Earth, a symbolic touch that perfectly illustrates the fine balancing act between personal and public that Rucker maintains throughout the book.

Without losing any of his id-driven wildness, Rucker has developed into a benevolent, all-seeing creator who rivals Om Herself for fertility. *Realware* brings to a fully satisfying conclusion this landmark quartet.

Two Inches High and Rising

When some uptight types express distaste for the fiction of Tom Robbins, I suspect they are not really objecting to his gonzo plots, his unfashionable cosmic consciousness or his sheer silliness. Rather, I have a hunch that they are registering a subliminal reaction to the undeniable richness of his prose. Salted with zany aphorisms, larded with offkilter metaphors and similes, calorific with pungent verbs, Robbins's prose style resembles some kind of Viennese confection, a double-chocolate fudge rich with nuts and raisins and the occasional fish-hook. For those raised on a diet of plain language simple writing, ingesting this kind of rum-soaked torte can produce insulin shock and indigestion.

I myself enjoy Robbins—in moderate doses. Realizing I had missed his last two books, I turned to his latest, *Fierce Invalids Home from Hot Climates* (Bantam, hardcover, $27.50, 415 pages, ISBN 0-553-10775-5), whose arcane title derives from a line of Rimbaud's poetry. I found the expected creaminess of language, but also a much more straightforward tale than I recall from such recomplicated novels as *Jitterbug Perfume* (1984). One main character—the forenameless Switters—onstage in every scene over the span of only a year or two (with appropriate flashbacks). One big problem. One minor-key conspiracy. One emotional resolution. All these authorial simplifying choices resulting in a not-unaffecting tale of hubris clobbered by nemesis and picked up off the floor by love.

Switters is a roguish CIA. One of the "angels" who work subversively from within the organization for humanist goals. On a private errand to South America, Switters has the misfortune (with silver lining) to encounter a native shaman with a curi-

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ously shaped head, a wizard named Today Is Tomorrow. Both cursed and semi-enlightened by the native brujo, Switters exits the continent confined to a wheelchair, doomed never to touch the earth again upon pain of instant death, and thus elevated two inches off the ground in emulation of the satori of a famous Buddhist sage. Switters's quest for mental and physical liberation eventually brings him to a forgotten Christian nunnery deep in Islamic Syria. Here Switters encounters the third prophecy of Fatima (in the real world, a secret supposedly recently disclosed by the Vatican—an unfortunate but not fatal turn of events for this book), as well as a lover for whom he will ultimately risk his egocentric existence.

Relying utterly on our implicit fascination with the neurotic, witty, conflicted Switters, Robbins chances everything on one throw of the literary dice. And although at times Switters's Menckenish pronouncements and proud slackerism begin to grate, mostly the wild events and overarching metaphysical quandary in which he finds himself carry us over any tiresome patches. The sacrificial climax of the book completely redeems all of Switters's moments of pettiness, and delivers a message of hope for a new millennium.

And did I forget to mention you'll get a great recipe for parrot soup?

Cool Britannia II

Tony Blair's poll numbers have dropped, tourists are avoiding the Millennium Dome in droves, and an adult Prince William is now subject to paparazzi attentions. The blush is off twenty-first century Swinging England, but no one seems to have told the UK's SF writers, who continue to produce wonderful work.

It would be a crime to pretend that Simon Ings's gripping new novel, *Painkillers* (Bloomsbury, trade, £9.99, 249 pages, ISBN 0-7475-4787-4) is pure SF, even though the MacGuffin at its heart is a strange gizmo that alters the user's sensory processing. In truth, Ings has written a classic noir tale, set in the present and full of duplicity, sexual entrapment, vicious thugs, and an antiheroic narrator who gets into the worst possible trouble through a combination of good intentions, stubbornness, and short-sightedness.

Husband and wife, Adam and Eva Wyatt first met in Hong Kong prior to that territory's return to the Chinese. Adam worked as a investigator for a law-enforcement group concerned with white-collar crime. Eva was the native daughter of a rich family. They met, married, and had an autistic son named Justin. Striving to provide the requisite level of professional care for his child—a noble enough goal—Adam turned for monetary help to the criminals he was supposed to be pursuing. Becoming involved with the evil Jimmy Lau and his family, Adam soon found himself immersed in intricate illegalities that ultimately crashed around his head. Escaping relatively unscathed to Britain, Adam believes himself safe. But soon the surviving Laus, including beautiful and amoral daughter Zoe, resurface and Adam is swept up in their machinations, undergoing a freefall into dark degradation.

Ings has mastered the blunt yet sophisticated prose stylings of such noir masters as James Cain and Jim Thompson, translating their groundbreaking work into his own terms. Consider this suitably ominous bit of Chandleresque description:

> *There was an intercom beside the heavy, brutal gate. I got out and used it and something clanged. I pushed experimentally at the drab-painted bars. The*

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gates rolled back on tracks mulched with dead gingko leaves.

The foliage went on and on, rhododendrons and wax trees and jasmine, wild indigo: the garden seemed arranged to take all the light from the earth. The drive made its final turn.

Shuttling between such exotic Hong Kong flashbacks and drab UK realtime, Ings evokes telling contrasts between his two milieus, revealing their common substratum of evil. This book races like whitewater rapids, and at times attains an almost too-painful-to-read immediacy and vividness. Cinematically graphic yet deeply literate, *Painkillers* offers a chilling ride into a hell both individual and universal.

Not only innovative in subject matter and treatment, but also in form, the publishing concept pioneered by Pete Crowther in the anthology *Foursight* (Gollancz, hardcover, £16.99, 216 pages, ISBN 0-57506-870-1) portends many good things to come. Here's Crowther's sharp notion: he commissions four novellas that are first published separately in handsome limited editions, then later collected into one volume. The initial quartet assembled in *Foursight* have already made their separate appearances, and are now ready for the parsimonious masses. Graham Joyce's "Leningrad Nights" paints a Kosinskian fabulistic portrait of a young boy during war. James Lovegrove's "How the Other Half Lives" is a keen parable about wealth and greed. In "Andy Warhol's Dracula," Kim Newman conflates myth and history in one of his typically revisionist fantasias. And Michael Marshall Smith's "The Vaccinator" offers *Men in Black* (1997) hijinx refracted through a Donald Westlake prism. All four stories rate high praise.

For a preview from *Foursight II*, dip into Paul McAuley's *Making History* (PS Publishing, hardcover, $52.00, 74 pages, ISBN 1-902880-09-9, available through Firebird Distributing at <*www.firebirddistributing.com*>). Here McAuley delivers an episode from his Quiet War series, which harks back to classic Delanyesque space opera. A lesson in how history can be rewritten by determined losers, this story about love among the ruins on a moon of Saturn also limns a exotic colonized solar system in rich detail.

Also available to U.S. readers from Firebird are two compendiums of the horrific, both produced by Enigmatic Press (<*www.epress.force9.co.uk*>). Derek Fox's collection, *Treading the Past* (trade, $13.00, 82 pages, ISBN 0-9537476-2-X) exhibits a writer of meticulous skills who chooses to focus on quiet chills rather than splatter. In four stories that deal with Victorian ghosts, modern petty crooks and cheating spouses, Fox reaches some splendidly spooky moments. In *Enigmatic Tales 8* (trade, $8.00, 152 pages, ISSN 1462-9062), editors L.H. Maynard and M.P.N. Sims assemble a bountiful nineteen stories (one reprint and eighteen originals) that carry forward the classic gothic, ghoulish work of such masters as M.R. James. My favorite was Alec Worley's "Projectionist Needed," where a modern setting contrasts effectively with ancient means of possession, with surprisingly laudatory results! Bundled with this volume for even more value is a chapbook containing Peter Tennant's "A Letter to Lovecraft," a fine contribution to the Mythos.

Alastair Reynolds is an astronomer by profession and a writer by grace of nature. Having published a number of attention-grabbing short stories in *Interzone* and elsewhere, he now makes his debut with his self-assured first novel (out of three

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commissioned by the U.K. publisher Gollancz). *Revelation Space* (trade, £10.99, 476 pages, ISBN 0-57506-876-0) confidently joins the ranks of postmodern space operas, offering intergalactic adventures aplenty, despite a little ambitious bloat.

In the 2500s, our galaxy is colonized to a small degree by humans of various clades. Alien sentience is surprisingly absent, save for two minor races. The Jugglers are ocean-locked creatures without our kind of tech, and the Shrouders are enigmas hidden away in deadly twisted segments of the continuum—the "revelation space" of the title, where hallucinations and epiphanies precede almost-certain death. Scattered clues abound as to the past history of our galaxy, and the conjectured scenario is not pleasant. Millions of years ago the Dawn War incurred mass extinctions of various sapients, and a few humans suspect that whatever ancient mechanisms killed these races still lie in wait.

Into this landscape, insert one professional soldier-assassin, Ana Khouri; one merciless starship officer, Ilia Volyova (also female, the *de facto* gender nowadays for tough spacers); and one rogue scion of a famous family, Dan Sylveste, whose Shrouder-altered mind seems to hold secrets inaccessible even to himself. Reynolds uses a three-track narrative to acquaint us with these main characters and a slew of supporting actors. The tracks fuse to two, as Khouri is shanghaied aboard Volyova's ship, the *Nostalgia for Infinity*, and then to one, as the *Nostalgia* picks up Sylveste as well. The denouement on an artificial planet circling a neutron star certainly rewards the careful buildup, which has been peppered already with sub-climaxes galore.

Reynolds proffers many gifts, among which are primarily speculative fertility and descriptive clarity. Here's his explanation behind the explosion of an ancient weapon:

> *Spacetime had been punctured, penetrated at the quantum level, releasing a minuscule glint of Planck energy. Minuscule, that is, compared with the normally seething energies in the spacetime foam. But beyond normal confinement that negligible release had been like a nuke going off next door. Spacetime had instantly healed itself, knitting back together before any real damage was done, leaving only a few surplus monopoles, low-mass quantum black holes and other anomalous/exotic particles as evidence that anything untoward had happened.*

Employing such no-nonsense yet evocative prose, Reynolds manages to produce some real poetry. And his choice to eschew FTL travel or FTL communications lends a deeper majesty to his slow empires.

Linda Nagata, Charles Sheffield, Alexander Jablokov—welcome your new crew member aboard!

If Edmond Hamilton and Benny Hill had collaborated on a script for the TV cartoon-series *Futurama*, the result might have been half as funny as David Garnett's *Bikini Planet* (Orbit, mass-market, £5.99, 344 pages, ISBN 1-85723-950-4). Stuffed into a early cryonics unit in 1968 against his will, the lovably blundering flat-foot Wayne Norton (Wayne Newton + Ed Norton?) awakes three hundred years afterward, into a universe that might drive Robert Sheckley mad. After some trouble with his reanimators, who regard Wayne as their chattel, our plucky but confused chrononaut is recruited by an agency known as GalacticCop and given his first star-crossing assignment.

Parallel with this track we follow

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the story of a young woman named Kiru, who finds herself exiled to Clink, the prison planet. Employing her wiles, Kiru bounces back into the dangerous criminal highlife and straight onto a collision course with Wayne. True love—which never runs smooth—results, and after many a hilarious snafu, the lovers are reunited on the titular planet (definitely *not* what you first imagine), which bears the marvelously Vonneguttian name of Caphmiaultrelvossmuaf.

Blithely abandoning along his path sanity, minor characters, and logical plotpoints, charting a zany course through some of the most deadpan skewed dialogue since Thorne Smith bestrode the globe, Garnett delivers a romp that forever shatters the false image of all U.K. SF as dour and gloomy.

M. John Harrison is an irreplaceable writer, especially in this day and age of cookie-cutter conformity, slavish trend-following, and shallow flash fiction. His haunted, haunting stories, as exemplified in *Travel Arrangements* (Gollancz, trade, £9.99, 262 pages, ISBN 0-57506-832-9), argue for the irreducible melancholy mystery of life. Borgesian, Kafkaesque, they evoke the quotidian with scrupulous exactitude while larding the meat of reality with rich veins of enigma. In stories such as "The Horse of Iron . . ." and "Gifco" he reaches Aldissian pinnacles of disturbing synchronicity. Contrastingly, even when dealing with ghosts and wizards, private eyes and vampires, as in "Seven Guesses of the Heart" and "Empty," Harrison escapes clichés to produce startling effects. Functional yet damaged, fragile yet hardened, Harrison's characters seek epiphanies and resolutions, fall short, yet continue to waltz mournfully with life nonetheless. A series of exploded moments, these stories are indeed "an axe to shatter the frozen sea within us."

Digital Reincarnation

Combustible wordwarper Lance Olsen delivers a double-barreled blast of fiction in our direction, and we should spread our arms and absorb the stinging, squirming pellets gladly into our bosoms, for they are coated with smart drugs and mutant symbiotic viruses that will enrich our mental genomes.

From Fiction Collective Two (Department of English, Florida State University, Tallahassee, FL 32306) comes *Sewing Shut My Eyes* (trade, $11.95, 145 pages, ISBN 1-57366-083-3), a blend of "traditional" short stories and text-dotted collages by Andi Olsen. In the former pieces, Olsen amps up Burroughsian and cyberpunkish riffs to stratospheric new levels, pushing all the hot buttons of our postmodern mediasphere. At the same time, he exhibits a joyfully subversive Marx-Brothers mentality, spinning off deadly jokes and puns faster than Robin Williams can change voices. This is fiction that cuts you open and then patches your wounds with synthetic skin that's shinier and more adaptive than your original epidermis.

One of Andi Olsen's alarmingly skittery Gothic collage-collaborations here with husband Lance is titled "Pentapod Freak Nest," bridging us directly to Olsen's new novel from Wordcraft (PO Box 3235, La Grande, OR 97850), *freaknest* (trade, $12.00, 258 pages, ISBN 1-877655-35-X). (And don't we chuckle grimly when we discover that *freaknest* uses at one point the image of sewing shut the single eye of an animal test subject?) Much in the mode of Olsen's award-nominated *Tonguing the Zeitgeist* (1994), but more invitingly streamlined (richer in dialogue, less determinedly thorny in prose stylings), this new book concerns five captive feral children discovered in a London apartment in the year 2023,

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when the apartment's owner, Dr. Jarndyce Mizzle-Sluggbury, unexpectedly snuffs. Brought to a hospital under the care of one Dr. Magda Karter, these five "orphans" soon reveal the dead hand of Mizzle-Sluggbury at work in their brains. Escaping, the warped children embark on a doomed journey across a world that exhibits all our cultural and political flaws and excesses elevated to Dickensian heights. As if Sturgeon's *More Than Human* (1953) had been rejiggered by Thomas Pynchon, this novel factors the algebra of power, childhood, and neurobiological tinkering into a magnificent yet blasphemous equation.

These two books are *not* your mother's Olsen Twins!

Theaters of Dreams

This year saw the publication of Jeffrey Thomas's collection of linked SF stories, *Punktown* (reviewed in an earlier column), and now, from Delirium Books (7 EMS B33 Lane, Warsaw, IN 46582, or <*www.deliriumbooks.com*>), appears a more heterogeneous collection, *Terror Incognita* (hardcover, $25.00, 158 pages, ISBN 1-929653-05-0). With emotional honesty and subtle yet direct language, Thomas finds horror, doom, and redemption in thirteen environments, mostly earthly, mostly populated by average folks. Innocuous objects—from T-shirts to attic windows to crickets to zoo animals—become foci of terror, dealt with evasively or boldly by some sharply rendered protagonists. The timeless parable titled "John Sadness"—about a post-apocalyptic community and its outcast children—struck home hardest with me. Thomas's charming introductions add flavor to this autumnal cauldron.

By way of contrast, Delirium also brings us Charlee Jacob's *Up, Out of Cities That Blow Hot and Cold* (hardcover, $29.00, 204 pages, ISBN 1-929653-04-2) Jacob favors a raunchier, more febrile prose, conjuring up comparisons to Tanith Lee and Poppy Brite. Enamored of exotic locales, improbable, inexplicable oddities (a perpetual full moon, for instance), and untidy fates for hapless victims, Jacob nonetheless shapes and nurtures her tales with plenty of craftsmanship. Those set in her native Southwest particularly show an attention to mimetic accuracy. Over-the-top pieces like "The Vat" are counterbalanced by near-Ellisonian tales like the title story (heretofore unpublished). And Jacob's pre-story autobiographical disclosures match Thomas's for interest.

Want to know how funny George Saunders is? He's come up with a line that matches Damon Runyon's famous "'Shut up,' he explained." Two dimwitted, TV-addled young single mothers are lackadaisically studying for their high-school equivalency degrees, and for a long futile stretch "they debate how many sides a triangle has." This kind of non-PC rendering of stupidity, cupidity, and avidity, larded with surrealism, is what Saunders excels at, and you'll find tons of such sardonic yet ultimately empathetic dissections in his second collection, *Pastoralia* (Riverhead, hardcover, $22.95, 188 pages, ISBN 1-57322-161-9). With stone-faced exactitude Saunders skewers capitalism, self-help gibberish, and our love of simulacra. His voice summoning echoes of Malzberg, Tenn, Kotzwinkle, and Goulart, can also wring tears from the reader with a tale of self-sacrifice such as "The Falls." His world is populated by Walter Mitty types and put-upon innocents gone stale, who live on streets with such names as "Self-Storage Parkway." Reading *Pastoralia* is the closest print equivalent of listening to a They Might be Giants CD.

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The earliest story in the collection, *Nightscapes* (Wildside Press, trade, $17.50, 220 pages, ISBN 1-58715-061-1) by Darrell Schweitzer, dates from 1973; the newest from 1998. In that twenty-five-year span, Schweitzer has matured into a tale-teller of commendable skills, wide ambitions, and high achievements. His "ominous and magical" stories here roam across disparate territories: Camelot, Howardian prehistory, urban alleys, Shakespearean islands. "In the Evening of Dreams" appeals most to me, with its Dunsanian wistfulness. But this sterling volume holds treasures to every taste. (Wildside Press, PO Box 45, Gillette, NJ 07933.)

Robert Charles Wilson depicts an unsparing universe as full of cosmic traps as any Lovecraftian vision, ameliorated solely, if at all, by human compassion rather than intellect. Yet his stories mostly read as pure SF. This neat trick is admirably on display in *The Perseids and Other Stories* (Tor, hardcover, $22.95, 224 pages, ISBN 0-312-87374-3), a series of tales that subtly share a common setting and characters. Three new stories rub elbows with older award nominees, and I defy you to distinguish between them for quality. Among the unpublished entries, I particularly enjoyed "Pearl Baby," a Bradburyian shudder piece concerning a mother and her most unconventional child. With his quiet voice and wise eye, Wilson ranks among our humbler yet more powerful short-story masters.

Drop this column and rush to an internet or brick-and-mortar outlet to purchase Terry Bisson's *In The Upper Room and Other Likely Stories* (Tor, hardcover, $24.95, 284 pages, ISBN 0-312-87404-9), certainly one of the standout collections of 2000. Bisson specializes in charting the intersection of commerce and dreams, the nexus where the marketplace or workplace sends human aspirations and lusts down strange pathways. And he does so in a voice that's funnier than just about anyone else's. Even when his characters are literally computer icons ("An Office Romance") they are utterly believable Everymen, not generic but full of wild kinks and quirks. Not only can Bisson meander gleefully through a recomplicated adventure like "Get Me to the Church on Time," he can also turn out short-shorts as perfectly as Frederic Brown ("10:07:24"). But I'm puzzled about one subtextual link glaringly evident throughout this volume: feminine undergarments play a part in almost every story. Might we expect the next collection to deal with the "Jockey versus Boxer shorts" controversy?

Baen Books is doing the field an enormous service by reprinting in four volumes James Schmitz's Federation of the Hub series. Compiled and edited by Eric Flint and Guy Gordon, the first two books—*Telzey Amberdon* (mass-market, $6.99, 436 pages, ISBN 0-671-57851-0) and *TnT: Telzey & Trigger* (mass-market, $6.99, 403 pages, ISBN 0-671-57879-0)—display all of the unjustly neglected Schmitz's considerable charms and talents. These adventures—the twilight efflorescence of John Campbell's psi-mania—still entertain and enthrall. Schmitz's future history—deploying mostly off-the-shelf components, yet with some genuinely farsighted biological and cybernetic speculations—allowed him the freedom to tell neat stories about spunky female protagonists, the ancestors of all those tough women starship troopers populating our novels today. With traces of Jack Vance's exoticism, exhibiting respect for all species, Schmitz's fixups recall a period when simple and honest writerly virtues could still find a home and audience. O

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SF CONVENTIONAL CALENDAR

In this holiday lull, let's look a little further ahead than just one month. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, and info on fanzines and clubs and on how to get a later, longer list of cons, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 6 months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard. - Erwin S. Strauss

DECEMBER 2000

27-31—ArmageddonCon. For info, write: **% M. S., Box 8215, Jerusalem 91081, Israel.** Or phone: **(972-2) 673-0003-7** (10 AM to 10 PM, not collect). **con@sf-f.org.il. armageddoncon.org.** Con will be held in: (Ar)Meggido(n) Israel (if city omitted, same as in address) and at the Laromme in Jerusalem. Guests will include: Niven, J. Vinge, McAuley, Watson.

29-31—EveCon. www.fantek.org. Hilton, Tysons Corner VA (Washington DC). "Friends, Fun and General Weirdness.".

29-Jan. 1—HogmanayCon. hogmanaycon.org.uk. Quality Central, Glasgow UK. S. & J. Robinson, A. Roy,

30-Jan. 3—NordCon. (048 058)-553-1073. **gkf@thenut.eti.pg.gda.pl.** Gdansk Poland. Annual con of Polish SF clubs.

JANUARY 2001

4-6—Hong Kong Conference, c/o Westfahl TLC 052, UC Riverside CA 92521. gwwestfahl@aol.com. Hong Kong.

5-7—GAFilk, 3630 Salem Dr., Lithonia GA 30038. www.gafilk.org. Atlanta GA. T. Smith, Cooke. SF/fantasy folksinging.

6-7—Trek Celebration, 11916 W. 109th #125, Overland Pk KS 66210. (913) 327-8735. www.sfedora.com. Dorn, Sirtis.

12-14—Arisia, 1 Kendall Sq., Bldg. 600, #322, Cambridge MA 02139. moreinfo@arisia.org. Park Plaza, Boston. Bujold.

12-14—ChattaCon, Box 23908, Chattanooga TN 37422. (770) 578-8461. www.chattacon.org. Clarion. Brin, Sterling, Kelly.

12-14—RustyCon, Box 84291, Seattle WA 98124. www.rustycon.com. Holiday Inn, Everett WA. Real Musgrave, J. Dalton.

12-14—MarsCon, 429-7 Lester Rd., Newport News VA 23601. marscon@erols.com. Ramada Inn Historic, Williamsburg.

19-21—ConFusion, Box 8284, Ann Arbor MI 48106. www.stilyagi.org/cons/confusion. Zettel, McNeil, Barber.

25-28—FURther ConFusion, 105 Sierra Way #236, Milpitas CA 95035. (408) 956-8790. Marriott, San Mateo CA. Furries.

26-28—SuperCon, Box 14355 Dinkytown Stn., Minneapolis MN 55414. Best Western 5th Ave., Rochester MN.

26-28—OhayoCon, Box 25718, Garfield Heights OH 44125. Airport Sheraton, Cleveland OH. Brady, Grant. Anime.

27-28—Creation, 100 W. Broadway #1200, Glendale CA 91210. (818) 409-0960. New Yorker Hotel, NYC. Barker.

FEBRUARY 2001

2-4—SheVaCon, Box 416, Verona VA 24482. (540) 248-4152. Wyndham Airport, Roanoke VA. R. Jacobs, L. A. Williams.

2-4—UK Filk Con, % Dennis, 15 St. Catherine's Cross, Bletchingley RH1 4PX, UK. Eastbourne UK. SF/fantasy folksing.

8-11—CapriCon, Box 60085, Chicago IL 60660. www.capricon.org. Sheraton, Arlington Park IL. A. Steele, G. Sullivan.

9-11—AstronomiCon, Box 1701, Rochester NY 14603. ralston@aol.com. Sheraton. S. Barnes, D. Harrod.

9-11—Star Fleet Ball, Snowdrop Cottage, 6 The Street, Sutton Waldron DT11 8PF, UK. Carrington, Bournemouth. Trek.

10-11—Trek Celebration, 11916 W. 109th #125, Overland Pk KS 66210. (913) 327-8735. www.sfedora.com. Champaign IL.

16-18—Boskone, Box 809, Framingham MA 01701. (617) 625-2311. Sheraton. G. R. R. Martin, Vess, J. Cohen, Coulson.

16-18—VisionCon, Box 1415, Springfield MO 65801. (417) 886-7219. Clarion. J. Schmidt, P. N. Elrod, T. Thomas, Myhr.

16-18—KatsuCon, 4140 Eby Dr., Dumfries VA 22026. (703) 624-6527. www.katsucon.com. Hyatt, Arlington VA. Anime.

AUGUST 2001

30-Sep. 3—Millennium PhilCon, Box 310, Huntingdon Valley PA 19006. Philadelphia PA. Bear, Dozois. WorldCon. $160.

AUGUST 2002

29-Sep. 2—ConJose, Box 61363, Sunnyvale CA 94088. conjose@sfsfc.org. San Jose CA. WorldCon. $100.

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MARCH COVER STORY

R. Garcia y Robertson, one of the very best adventure writers in the business, returns next month to take us back to the darkest days of World War II, and aloft with the crew of the "Shady Lady" as she sets off on a mysterious and top-secret mission . . . and *into* a dazzlingly fast-paced, flat-out, headlong, extravagant adventure that will soon embroil them with Nazis, Top Brass, Mysterious Girl Spies, Flying Saucers, and menacing Mongol hordes roaming the Russian steppes . . . in addition to the *usual* dangers (flak, enemy fighters, people *shooting* at you) of flying a bombing mission over a hostile Nazi-controlled Europe in the middle of a war. . . . This is pure, page-turning, inventive entertainment at its best. Don't miss it!

TOP-FLIGHT WRITERS

Nebula and World Fantasy Award-winner **Lisa Goldstein** returns with a subtle yet penetrating investigation of how loyalty and personal responsibility remain as important (if not *more* important) on a distant alien world as they do on Earth, in "The Go-Between"; Hugo-winner **Allen Steele** takes us aboard a ship in deep space, in the lonely gulf between star systems, for the harrowing story of a man who wakes up to find that he's got a *very* big problem indeed, as he must face "The Days Between"; **Kage Baker,** one of our most popular and prolific contributors, returns with a wry look at what literary immortality might *really* be like, in "The Dust Enclosed Here"; **Robert Reed,** another popular and prolific contributor, offers us a surprising study of the proper use of "Past-Imperfect"; and **Nisi Shawl** takes us to the very far future for some hard lessons in survival amongst the decadent immortals of that pastel era, lessons you'll need if you're going to make it to the safety of "Shiomah's Land."

EXCITING FEATURES

Robert Silverberg's "Reflections" takes a critical look back at that artistic "revolution" in science fiction known as "The New Wave"; **Norman Spinrad's** "On Books" column muses about what happens "After Science Fiction"; and **James Patrick Kelly's** "On the Net" column browses through some "ebooks"; plus an array of cartoons, poems, letters, and other features. Look for our March issue on sale on your newsstand on January 23, 2001, or subscribe today (you can also subscribe electronically, online, at our *Asimov's* Internet website, at **http://www.asimovs.com**), and be sure that you miss none of the great stuff we have coming up for you this year!

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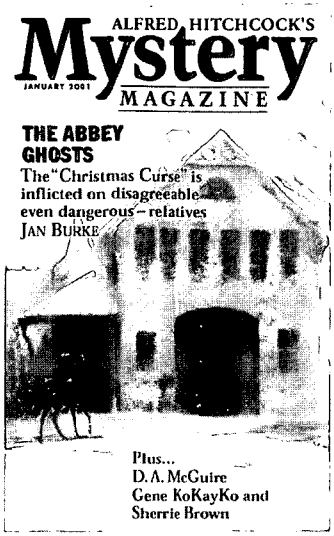

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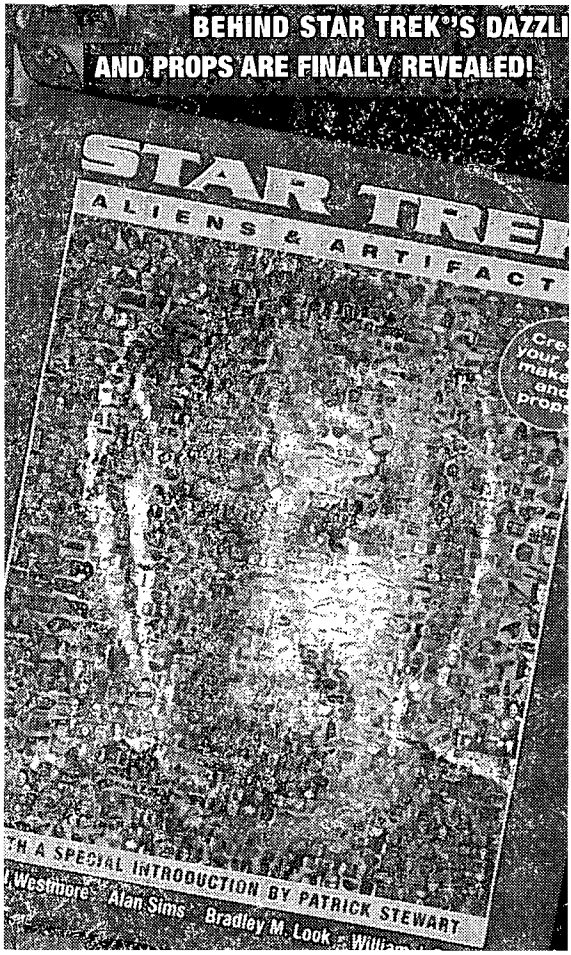
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